TREES MAGAZINE

This Sprayer Goes Back A Long Time (See Story Page 6)

Massachusetts Tree Wardens Conference – Univ. of Mass., Amherst – March 23-27

Progress In Shade Tree Spraying — ***Howard Ingerson***

Business District Tree Planting in Flint — ***Wm. A. Ruth***

January-February, 1959 *The Journal of American Arboriculture* Vol. 19, No. 2

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ALONG THE WAY With .... EDW. SCANLON

■ FUNNY we haven't seen any of the DAILY BOX-SCORES on the NUMBER OF SHELLS that have FALLEN ON QUEMOY in the past several months. I wonder if they HAVE A CHECKER on the guy who counts the NUMBER OF COMMIE SHELLS that land—boy oh boy if HE MISCOUNTS, the State dept. WILL FIRE HIM, or else cut his salary to 20 G's.

■ **One of the BEST SLOGANS I've seen is one observed in a HOTEL RECENTLY —"Warning—DO NOT SMOKE IN BED —The Ashes that Drop on the Floor MAY BE YOUR OWN."**

■ There are THREE TREES here AT THE RANCHO that should get a REAL WORKOUT this winter—they are: CEDRUS ATLANTICA GLAUCA, and C. a. aurea (GOLDEN MT. ATLAS AND WHAT A HONEY), and our Redwood (SEQUOIA GIGANTEA). Since Thanksgiving it has BEEN COLD, about 8° below normal—WITH DROPS DOWN TO 10° BELOW. One good thing tho, we have had a SNOW COVER whenever the BOTTOM DROPPED OUT. Will be interesting to see how THEY COME OUT of this winter.

■ **CHUCK WEDEKIND, our able representative at Philadelphia, AND WIFE MARY LOU welcomed their THIRD HEIR on Jan. 11—a NINE POUND GIRL. The exhausted parents HAVEN'T FOUND a name yet.**

■ By a STRANGE COINCIDENCE the FIRST SHAVE I have had with a SAFETY RAZOR IN 18 YEARS occurred in the MIRAMAR HOTEL in Santa Monica recently—this was FORMERLY THE HOME of the razor baron, KING C. GILLETTE. I FORGOT THE CORD to my ELECTRIC SHAVER in SAN JOSE and arrived in SM too late, on a Saturday, to get a new one—so BOUGHT A GILLETTE. One shave WAS ENOUGH. When I finished my face looked like I had WASHED WITH A BARBED WIRE FACE CLOTH. Got a NEW CORD Monday.

■ **It WAS COLD and raining IN PORTLAND (Jan. 18). Chilly and RAIN IN SAN JOSE, and spotty sun, not hot and some SMOG IN L. A.**

■ If you WANT TO READ something that will make YOU THINK and give you plenty of CHUCKLES, FUTILE CHUCKLES, pick up a little paper back book titled "43,000 YEARS LATER." It is the story of a SUPER RACE that discovers the PLANET EARTH in the year 45,000 and finds that it DESTROYED ITSELF about the year 1984.

■ **The "PLANTCARE" Co. in Kent is the new NAME OF FRANK LANCASTER (formerly with Davey Tree Expert). It is BOTH A CONSULTING and tree service. Drop FRANK a line and WISH HIM LUCK as we do herewith.**

■ Christmas was QUITE A DAY. Our little Manchester "TIMMY" had FOUR PUPS while we were visiting my MOTHER IN TOLEDO. It was bitter cold and we wanted to get BACK TO THE RANCHO. Started the car about an HOUR BEFORE WE LEFT to warm it up—it warmed up all right—WAS SO HOT I must have lost 5 lbs.—NO CRACKS—Anyway Timmy is fine and so are the pups—cute, looks like PAPA WAS OUR COCKER.

■ **L. D. ELY of Waynesboro, Pa., renews his sub with the note that "HE WOULDN'T BE WITHOUT THIS TREE BIBLE." He likes the new section "Branches of the Law." SO DO WE L. D. and some very WORTHWHILE DISCUSSIONS are lined up for FUTURE ISSUES. Anybody got any questions?**

■ HUGH THOMPSON writes about the RECENT MEETING of the fast moving KANSAS ARBORISTS ASSOCIATION held in Manhattan on Jan. 15. FRED WAGNER of McPHERSON was elected to a third term as president (watch it boy); LEO CAIN OF OVERLAND PARK is the new V. P., WHILE HUGH continues as Scribe.

■ **The KANSAS GROUP is very active in stimulating ARBOR DAY activities and within a year or two, according TO HUGH, they hope to present the idea of NATIONAL ARBOR DAY—"THE LAST FRIDAY IN APRIL" and change the present legal date. GOOD DEAL.**

■ PACIFIC POWER AND LIGHT'S H. L. Wiegel (Portland, Ore.) renews their sub with this nicey "WE HAVE THOROUGHLY ENJOYED THIS MAGAZINE AND HAVE GAINED MUCH USEFUL INFORMATION FROM IT." Those are the things that make one feel good. THANKS.

■ **About the FINEST, RICHEST LOOKING BULLBAY MAGNOLIAS I have ever seen were those growing in MEDFORD, OREGON. On Jan. 22 stopped there to give a TALK ON STREET TREES and was given a tour of the VERY NICE LITTLE city by MRS. EDYTHE EDEN, the energetic head of the CITIZENS STREET TREE PROGRAM. These magnolias (M. grandiflora) were certainly HAPPY IN THE BEAUTIFUL VALLEY where Medford nestles. Good rich foliage, a full crown, but none that I saw had ATTAINED GREAT SIZE.**

■ I wondered if the COLDER WINTERS —colder than central and southern California—could have SUCH A GOOD EFFECT on the magnolias—plus of course the GOOD SOIL?

■ **After the PROPAGATORS MEETING we conducted MANLEY WEBB and STEVE O'ROURKE (who has finally come home to roost) on a TOUR OF NEW TREES on Cleveland streets and wound up giving the OLD RANCHO the ONCE OVER.**

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TREES MAGAZINE
7621 Lewis Rd., Olmsted Falls, Ohio

The Editors of TREES invite discussions, comments and all type of literary materials pertaining to trees and tree preservation from any person engaged either in the scientific advancement or commercial development of the field.

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■ The THIRD EDITION of PAT PIRONE'S well known TREE MAINTENANCE (Pat is shown, in cut, lancing the tooth of a Bigtoothed Aspen) will be OFF THE PRESS March 12. The CHAPTER ON TREES has been BROUGHT UP TO DATE, which we think IS VITAL—the rest of the text is also COMPLETELY REVISED. Order one now from TREES —$10.00.

■ **I have just SEEN A CLIPPING, sent to me by WOODY METCALF, from a paper named "THE TOWN CRIER" at WAYLAND, MIDDLESEX COUNTY, MASS. The heading of the piece was "TREES, GROWING WILD, MAY TURN SUBURBS INTO JUNGLE"—Brother of all the SCREWBALL LUNATICS this anonymous moron takes the cake. If I HAVE SPACE for this MORONIC DIATRIBE I'll run it in THIS ISSUE—next for sure.**

■ The APPEARANCE OF SCANLON ENTERPRISES has been AGREEABLY AUGMENTED by the addition of MRS. JUNE FAULDS to the staff. MRS. FAULDS has a splendid BACKGROUND OF ACHIEVEMENT in Public Relations and has already scored SOME DIRECT HITS in the establishment of our P.R. department.

TREES Magazine is a bi-monthly Journal published at Olmsted Falls, Ohio, by Edward H. Scanlon, and is devoted to the furtherance of the technical and business administration of Trees (Street and Ornamental); and Parks (Municipal and National) in the U. S. Scanlon Publishing Co., 7621 Lewis Road, Olmsted Falls, Ohio. Subscription by mail $3.00; outside United States, $3.50. Advertising rates upon inquiry. Closing date for advertising copy—10th of month preceding date of issue. Unsolicited manuscripts must be accompanied by return postage.

Jan.-Feb., 1959 **Journal of the National Arborist Association** Vol. 19, No. 2

EDWARD H. SCANLON, Editor
7621 Lewis Rd., Olmsted Falls, Ohio ADams 5-2357

"No place is complete without trees. A home without trees is charmless; a road without trees is shadeless; a park without trees is purposeless; A COUNTRY WITHOUT TREES IS HOPELESS."

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Out On A Limb

TREES ON BUSINESS STREETS

The planting of trees in business areas is by no means new, and it did not just suddenly blossom out as a brilliant idea, but for some reason or other in the past few years it seems to have surged forward and some splendid projects have been undertaken.

There is no question but that trees on business streets took a vicious beating in the municipial expansion days during and just after the depression. Streets of beautiful trees were stupidly destroyed. Two horrible examples that come to mind are Euclid Avenue in Cleveland and Wilshire Boulevard in Los Angeles and Santa Monica—and look at the horrible messes these streets have become. And there are probably hundreds of others.

Some of the businessmen of that "Woodsman Fell That Tree" era are probably still around, and they and the young bunch that have come along since the war, have realized that they pulled a great big juicy boner. The decentralization of cities, the vast development of suburban shopping centers, too many of which are oasises of black-top, poorly designed buildings and glaring urgly signs, these factors have given rise to the efforts of downtown business interests to attract shoppers back to the central areas.

The irony of it all is that, in spite of "modernized" fronts and other superficial and garish strokes of genius they finally had to come back to the "accursed" trees.

Had they listened to the people they scathingly called "tree lovers" in the first place they might have started a sound program of civic beautification twenty or thirty years ago that today would be paying dividends in helping to keep people from wandering out to the sticks.

We predict the black-top eyesores will someday realize the mistakes they have made and begin frantically to plant trees to take the curse off their hastily constructed blights.

Maybe European cities went through this same cycle years ago, we don't know, but one thing is sure, they have corrected the mistake—if one did exist. Most European cities we have visited have tree-lined business streets, wide lawn panels, small park areas thruout the downtown sections. The point is why can't we follow this good example and profit from the charm they have imparted to their cities through the judicious use of good trees, flowers and lawns—or maybe it is cheaper to let things go to pot and then try to lock the door after the space ship has been stolen.

The work that has been done in this important field of civic development in Los Angeles, Flint, Baltimore, Cleveland and a few other cities is worthy and undoubtedly will be followed by similar projects in many other cities very shortly. We are quite certain it will as more and more people make known their abhorrence of the seedy miserable appearance our cities are taking on.

The flawless beauty of the dollar is one thing, but thank heavens more men are beginning to realize that "man does not live by bread alone."

Diagnosis – All Important

The first and most important step in correcting any tree trouble is to correctly diagnose what is wrong.

This was the warning of Ray A. Keen of the Kansas State College horticulture department in a prepared talk before the fifth annual Kansas shade tree conference Friday at Manhattan.

As an example, Keen noted that a tree might have yellow leaves due to iron deficiency, virus disease, low temperatures, chemical and spray damage, or the tree might even be a golden variety that normally has yellow leaves.

Keen suggested that valuable trees get a periodic "check-up" by trained men to assure a long and useful life.

"This becomes more important when unusual weather conditions weaken the tree and favor certain insects and diseases," he said.

One of the most common causes of tree troubles in Kansas is 2, 4-D weed killers used improperly and carelessly. Keen said persons causing damage with 2, 4-D are liable for such damage.

Trees may also be injured by such unusual, and difficult to diagnose, killers as leaky gas mains, lightning that did not mark the tree, salt or chemical damage from thawing ice from sidewalks or drives in winter, and dust-preventing chemicals. Volatile petroleum products also cause damage that is difficult to detect.

Mrs. John Spaulding of Wichita complained that the layman had no standards to go by to determine whether he needs tree service nor has he any guides as to how much tree service should cost, or who are reliable tree service people. She suggested the need of a diagnostic service for advising tree owners as to what should be done.

Reviewing insect and disease troubles of trees for 1958, Hugh Thompson, K-State entomologist, said Dutch elm disease reached "epidemic proportions" in and around Kansas City last summer. He warned that unless more programs and more extensive programs are initiated in eastern Kansas to keep Dutch elm disease in check, the loss of elms would become very evident in a few years.

Heavy dormant applications of DDT and dieldrin have been used experimentally the past two years in an effort to control the disease, but Thompson said these did not give sufficient protection, unless a thorough sanitation program is kept up.

Incidence of phloem necrosis also is increasing. Thompson said this disease is a serious problem in itself, but elms that it kills serve as sources of bark beetles and reservoirs for Dutch elm disease.

"Wherever phloem necrosis has become a problem, all healthy elms should be sprayed with DDT during late May or early June."

Thompson noted that cankerworms also are building up in numbers to cause serious concern. He said this increase probably will continue for another three to four years, unless control programs are undertaken.

A. A. N. J. New Officers

Taken just before Chow at the recent AANJ meeting are the new officers and their wives: (Standing L. to R.) Ed Brarman, President Certified Tree Experts; Ed Terner; Charles L. Post, Vice President AANJ; Dr. Stephan Batchelder, Rutgers University. (Seated L. to R.) Mrs. E. Brarman; Mrs. E. Terner, Mrs. A. E. Knof; Mr. A. E. Knof, President; Mr. Harry Banker, Exec. Secy. National Arbor Day; Mrs. Harry Banker; Mrs. C. L. Post, Mrs. S. Batchelder.

Elm Leaf Beetles In Kansas

Elm leaf beetles have been reported in Kansas for the first time, according to Hugh Thompson, entomologist at Kansas State College, Manhattan. He identified the beetles from specimens sent by a Dodge City housewife.

Elm leaf beetles long have been a serious pest of elms east of the Mississippi river. But only in the last few years have they been a problem west of the Mississippi.

The new pest is not a tree killer, but does cause elm trees to lose all their leaves each June. East of the Mississippi the elms put out new leaves in July and August, but Thompson questions whether this will occur under Kansas conditions.

Beetles emerge from hibernation the early part of June and proceed to chew the lower leaf surfaces. Then the remainder of the leaf crinkles up, turns brown, and falls off the tree. Thompson said the Kansas agricultural experiment station and the Kansas entomological commission would join next June to survey the extent of elm leaf beetle infestation in Kansas.

Thompson said that in many instances the elm leaf beetles prove to be a bigger nuisance in the household than they do on the trees. In winter the beetles hibernate in large numbers in protected places and become a household pest around doors, windows, and fireplaces through which they gain entrance to the house. At times beetles can be found by the hundreds on drapes inside a home.

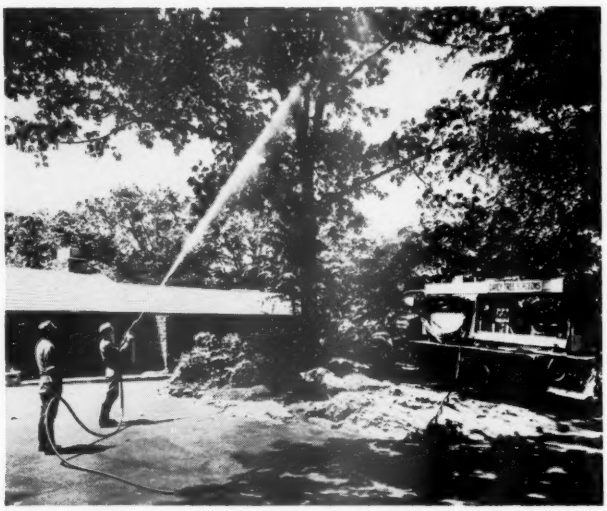
The beetles are about a half inch long and their basic color varies from olive green to light tan with two darker stripes along the outside edge of the wing covers.

PLANT AMERICA — WISELY

Progress In Shade Tree Spraying Methods And Equipment

By Howard Ingerson,

Product Research, John Bean Division, Food Machinery & Chemical Corp., Lansing, Michigan



Custom Shade Tree spraying with modern hydraulic Sprayer.

As we have prepared for the observance of the 75th Anniversary of our company in 1959, we have reviewed shade tree spraying from its early beginnings to the present time, as a means of further improving our methods and equipment for this ever incerasing requirement of shade tree insect and disease control. The progress that has been made has been through the cooperation of the personnel at the Federal and State Experimental Stations; by the engineers of the spray equipment manufacturers, and the research and field staff members of spray chemical manufacturers. The officers and members of the national, sectional, and state shade tree conferences and park executive groups, Trees Magazine, and the many others interested in protecting our shade trees have contributed to the rapid progress and greater economy in spraying methods and equipment.

Let's review this progress starting with the period 1900 to 1920. In this period the spraying of shade trees was started with hand pumps and then as small power sprayers became available they were put into this service in the 1900 and 1910 era, but pump capacities were limited and shade tree spraying was slow and laborious. However, shade tree insects were controlled effectively wherever thorough, careful work was done with the best use of the materials, methods and equipment then available.

The real expansion of shade tree spraying came in the period 1920 to 1945 with the availability of larger capacity spray pumps in the range of 35 to 60 gallons per minute, capable of delivering 400 lbs. pressure at the spray gun, oftentimes having to overcome high pressure losses through several hundred feet of spray hose. Improved spray guns with adjustable features as contrasted with only the solid stream gun, added to the acceptance of shade tree spraying and reduced the cost of the operation.

In 1935 the first completely enclosed oil bath spray pumps were made available to the shade tree operator, and also the first all steel sprayers. With these important improvements, sprayer fleets were expanded by towns, cities, states, and custom operators, and the acceptance of shade tree spraying spread rapidly from the eastern sections to the Central States and to the West Coast.

First large air volume mist sprayer in shade tree work 1950.

A typical spray crew still consisted of the truck driver, one or more "gun men," and for each gun man usually one or more hose men to handle the required long length of hose to allow the gun man to work most effectively completely around each tree to be sprayed. It is common practice to apply from 20 to 50 gallons of dilute spray material per tree during the foliage applications, and only slightly less during the dormant season because of more wind interference and the requirement of more complete soaking of all parts of the tree for dormant insect control. These large amounts of liquid per tree are indicators of the need for the larger pump capacities, and the large sprayer tanks that came into use during that period and are still regularly used where hydraulic spraying best fits the needs. They especially meet the requirements of shade tree protection in locations not accessible to highways, streets or driveways. Hydraulic sprayers with suitable lengths of hose are used to allow these trees to be thoroughly sprayed. This is of special importance in a program such as Dutch Elm Disease control where every elm tree in an area must be sprayed for the control program to be fully effective.

In 1945 the forest insect division of the U. S. Bureau of Entomology and Plant Quarantine, established a project at New Haven, Connecticut to adapt ground-type mist sprayers to shade tree insect control. This project followed the successful use of the auto-gyro and aero-

plane application of insecticides for forest insect control.

It is interesting to note at this point that the very rapid changeover from hydraulic spraying to mist spraying of shade trees has come from this first introduction of mist sprayers as recently as 1945, and the more rapid changeover has taken place since 1950.

This work at the New Haven Field Station had such an important bearing on the adaptation of mist sprayers to present day shade tree insect and disease control that it is important that there is a record of the specifications of this first sprayer. The mist sprayer used in this project was originally designed for orchard use at our California factory and delivered 8500 cu. ft. of air per minute at a velocity of 120 m.p.h. This proved so successful in the research and demonstration phases of the shade tree program that other mist sprayers of approximately these same specifications were very soon being made and put into commercial use. This size equipment, if properly operated and the operation restricted to favorable period of low wind conditions, does a satisfactory job of mist spraying to heights of approximately 75 ft. However, many of these early mist sprayers of these specifications were used under marginal or unfavorable conditions or by inexperienced operators and the results in insect and disease control varied rather widely and mist spraying was delayed in its acceptance because of these facts.

Rapid Acceptance of Mist Spraying with Larger Air Volume Mist Sprayers Available in 1950

Engineering principles borne out by field experience in the early years of shade tree mist spraying proved that a large volume of air at medium velocity would provide greater rate of work and permit spraying under more unfavorable wind conditions than smaller air volume at higher velocities. A simple comparison will show the principle. If we wanted to throw a ball to the top of a 100 ft. elm tree we would select a baseball instead of a ping pong ball. The baseball being heavier and having more mass, if thrown with the same effort (velocity) will carry the 100 ft. even against considerable wind while the ping pong ball would be easily deflected from the target with even light air currents.

Perhaps the principle can be explained further in this way. Each one thousand cubic feet of air weighs 75 lbs. A mist sprayer discharging 8000 cu. ft. per minute is only "throwing" 600 lbs. per minute while the one discharging 28,000 cu. ft. is "throwing" 2100 lbs. (over one ton) of air per minute. At the velocity of approximately 100 miles per hour, it is easy to see how this combination of large air volume at medium velocity carries the mist spray through and to the tops of even the largest trees quickly.

I am sure we are all interested in reducing total spraying costs. Then the next consideration in mist spraying is the rate at which dependable complete spraying can be done. The wide experience gained in this specialized field since 1945 has shown that satisfactory insect and disease control can be secured with the larger air volume mist sprayers several times faster than with the smaller equipment. This is for the same reason that a given surface area can be painted faster with a wide paint brush than with a narrow one. The area of the tree covered by the larger "brush" from the larger area discharge outlet is several times that from the smaller area outlet of the smaller equipment. This in turn means fewer strokes of the brush per tree, more trees per hour and per day.

These principles also explain why shade tree spraying with the larger mist sprayers is several times faster than hydraulic spraying and why the truck or tractor can usually be kept in continuous motion. This, in turn, simplifies traffic handling in the spraying area. Records by research personnel show complete spray coverage of average (50 to 70 ft. high) trees from ½ to one minute per tree, depending on the conditions surrounding the particular spraying job. This allows one large air volume mist sprayer crew of two to do the work of several hydraulic spray crews wherever the trees are accessible to streets or highways. It is this much greater rate of work and reduced labor cost per tree that has allowed mist spraying to gain in favor so rapidly and the larger mist sprayers to replace the earlier smaller models.

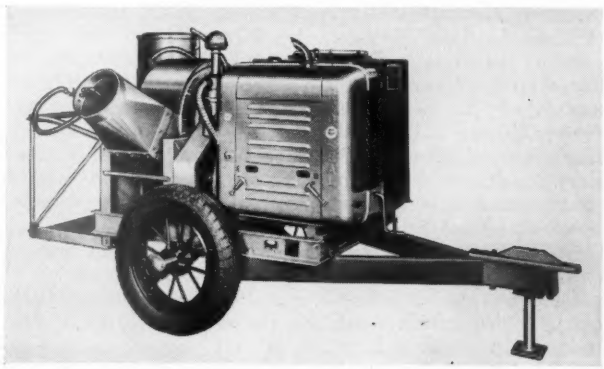
For the first time in 1950, mist sprayers especially designed for shade tree work and with air capacity of 28,000 cu. ft. per minute at 100 m.p.h., were offered commercially, and this marked the beginning of the very rapid acceptance and use of mist sprayers to replace hydraulic equipment wherever the sprayer could be hauled to the trees. It was during this same period that Dutch Elm Disease was spreading so rapidly and becoming such a serious menace to the many thousands of elms throughout the Eastern and Central States, so the advent of the large capacity mist sprayer came at a very fortunate time.

60,000 cubic feet per minute mist sprayer in dormant shade tree spraying.

These larger type units were put in both commercial use and in use by government and state agencies in such locations as the U. S. Department Agriculture Field Station at Columbus, Ohio and by the University of Illinois. These large units were also put in commercial use by custom operators throughout the Eastern and Central States, and there are now several hundred of these large type mist sprayers in commercial use applying both dormant and foliage applications and suited for handling both oil emulsions and water suspensions of spray material.

As these large air volume mist sprayers came into more general use, improvements were made with more convenience for the operator, simplified controls, and this type of equipment has replaced or supplemented hydraulic spraying very generally throughout the country. While

(Continued on Page 28)



Mist sprayer used in U. S. Bureau of Entomology project at New Haven, Conn. 1945—and Cleveland, Div. of Shade Trees, 1946.

Business District Tree Planting In Flint

No. 1 Tree planted 3"-4" below walk—Ready for masonry slab installation.

No. 2—Wooden frame of 1"x3", set and leveled. Note 6" pipe with brass plug set in ground at right-hand corner of frame. Pipe will permit checking of soil with auger.

By Wm. A. Ruth

City Forester
Flint, Mich.

GENERAL NATURE OF PROJECT:

The Downtown Landscape Project involved the planting of 85 deciduous trees within the sidewalk, just inside the curb line along Saginaw Street from Fifth Street to Fifth Avenue and on Detroit Street from Fifth Avenue to the intersection of Saginaw Street at McFarlan Park, the main business street in Flint. Thirty-seven of the trees are enhanced with the inclusion of circular masonry bench wells, topped with red wood seats. Thirty-eight of the trees are protected by a masonry slab designed to provide air to the soil, to prevent compaction, and to reduce salt damage. The remaining 10 trees are planted in sites where an earth parkway exists and were treated as regular tree planting.

Origin of Project: The project was developed by the Forestry Department of the Flint Recreation and Park Board, William A. Ruth, Forester, at the request of the Greater Flint Downtown Corporation. Design and consultation was given by the Board's Landscape Architect, George I. Liljeblad. The overall plans were coordinated by Donald F. Sinn, Superintendent, of the Flint Recreation and Park Board. However due recognition must be given the Greater Flint Downtown Corporation, whose members are merchants and businessmen in the downtown section of Flint. This group, having a firm conviction that a business area could be beautiful as well as being functional, not only completely financed the project but gave it their fullest cooperation.

Authority for Project: After the basic plans of the project were accepted by the Greater Flint Downtown Corporation, approval was given by the Flint Recreation and Park Board. Because of the direct or indirect involvement of other municipal departments also, approval was then obtained from the Mayor and City Commission.

Method of Financing: It is normally a function of City Forestry and Park Departments to plan and develop parkway projects. In Flint, however, due to limited funds in recent years city tree planting has been possible only at the request and expense of abutting property owners, with the trees procured, planted and maintained by the Forestry Department at actual cost. In this case the Downtown Flint Landscape Project was offered to the Flint Recreation and Park Board and the City of Flint by the Greater Flint Downtown Corporation as a commemorative gift in connection with the General Motors Golden Milestone Observance in 1958. Estimate of total costs of the project, excluding administration and supervision was established by $23,000.00. This sum having been made available by the Corporation, the project was assured without expense to the taxpayer.

Purpose of the Project: When first approached with the idea, the Forestry Department immediately studied the advantages and disadvantages of trees in a central business district. The project was considered feasible because of the experience of similar tree plantings in other cities. Trees are desirable anywhere; certain objections to existing street trees can be traced back to poor planning or selection of tree species. However it was felt that trees along Saginaw Street in the business section was especially desirable and practical for the following reasons: any natural foliage with its soft, irregular texture and shape would enhance a central business area; the sharp angular buildings present a naked appearance and foliage would tend to soften this effect as well as relate the structures, one to another, the green coloring is restful and as such would make its surroundings more attractive. People usually appreciate the shade given by trees but sometimes do not realize the additional benefits derived from them. The foliage acts as an acoustical barrier, muffling sounds of passing vehicles and reducing the reverberating noises along Saginaw Street. This foliage has an additional effect of cooling the surrounding air through the process of the evaporation of water from the leaves. All of these were considered definite advantages. It was felt that they outweighed such disadvantages as falling leaves and the reducing of some sidewalk space where the trees were to be located.

Preliminary investigations: Inquiries with various cities throughout the U. S. with similar plantings were made. While tree species varied in most instances, Foresters who were contacted agreed that such a project was feasible and desirable. They all felt that "planter boxes," or an installation *above* the walk, was impracticable, and any planting should be made in soil pockets beneath the walk.

Underground obstructions such as sanitary sewers, water mains, gas mains, electrical ducts and telephone installations were checked out through the various

agencies responsible for them. It was found that generally these utilities would not prohibit tree planting, although in a few instances ducts or mains beneath the walk necessitated slight changes in the planned tree locations. It was also brought out by the gas company that from another point-of-view, the trees would serve a definite benefit. That is, in the case of possible gas leakages, the tree "pockets" in the walk would provide vents for escaping gas and reduce the possibility of gas accumulation under or in adjacent buildings. The trees would also facilitate the job of checking gas content in the soil by providing openings easily accessible to the testers.

Obstruction to overhead street lighting was considered especially since 20,000 lumen, high intensity, fluorescent lamps had been recently installed along Saginaw Street. However as these lamps were placed 100′ apart, placement of the trees midway between the poles was not believed to create any serious obstruction. This consideration did indicate a maximum of 3 trees to each side of a block and thus reduced the total number of trees which could be planted within the 15 blocks to 85.

Selecting Tree Species: Much thought was given the selection of the trees used. The ideal tree should be resistant to drought, smoke and gasoline fumes, disease and insect attack. Along North Saginaw and Detroit Streets the narrow sidewalk necessitated a narrower columnar-shaped tree. In addition the trees selected had to be available in larger sizes than usual, i. e., 3″ to 4″ D.b.h. After extensive study and consultation the London Plane and the Ginkgo seemed to fulfill all of these requirements.

The London Plane is a very hardy tree and has been used for this type of planting in the Eastern States. While it is a large tree in residential areas, the adverse site conditions in the downtown area should inhibit its growth. Its spreading habit limits its use to South Saginaw Street only where the walks are 15 feet or more in width.

The other species, the Ginkgo, is a tree native to China. This interesting tree is exceedingly hardy, growing very slowly and is not affected by disease or insects. Its habit of columnar growth during its youth enables it's use on the narrower sidewalks.

Several other trees might have been used in this type of planting. In fact certain other species are used in European cities to great advantage. However none of the other acceptable species were available in larger sizes and therefore were ruled out.

Protection of the Trees: The problem of soil aeration and elimination of soil compaction was considered. The masonry bench-well (see Drawing No. 1) was chosen as the most practical and functional answer. This installation provides seating for weary shoppers and downtown sight-seers as well as preventing compaction of the soil adjacent to the tree. An additional feature is the protection of the soil pocket from salt spread on streets for ice removal during the winter months. In areas where the sidewalk widths prevented these bench-wells, a masonry slab was designed to prevent soil compaction, (See Drawing No. 2). Both of these installations would also facilitate watering of the trees when necessary.

Work Schedule: Work began as soon as the trees were purchased and delivered. Department of Public Works crews were given the responsibility of breaking the walk, excavating the pockets and installing the masonry structures after the trees were planted. All tree planting was done by Forestry Department crews. The masonry structures and seat boards were contracted with local firms.

WORK OUTLINE:

Excavations: Were begun by DPW crews early in March. The first pockets, for the masonry slabs, were 5′ x 5′ x 5′ with all excavated material removed. A crew from the Forestry Department followed, backfilling each excavation with a loam-peat mixture leaving about a 2′ deep hole for the tree ball. Each ball depth was measured and allocated to a particular site, and the backfilling conformed to place the tree at the required depth, an important item as the planting was done at night. The excavations for the trees where the bench wells were to be installed were limited to a 4½′ diameter circular opening in order to leave enough sidewalk to support the 5′ wide masonry structure.

The excavating crews discovered several unknown conduits, an abandoned gas line, an old inter-urban track encased in concrete and one basement not listed on our preliminary report. While this caused some special problems, it did not seriously hold up the project.

Planting: Forestry Department crews, working at night, planted most of the trees as soon as the excavations were complete. This schedule was set up to avoid traffic congestion and to eliminate the possibility of pedestrian accidents in the open excavations. It was made possible because of the fluorescent lighting along Saginaw Street. However, this schedule is not recommended as crews tend to become less efficient in the early morning hours. If traffic conditions allow, daytime planting of the trees as soon as the excavations have been dug

Turn Page

No. 3—First half of masonry slab set in place. At sites where tree trunk was closer than 24″ from curb this slab was cut to fit.

No. 4—Second half of slab set. Note—slab overhangs wooden frame by 3″.

would be desirable. The crew consisted of a 4-man planting crew aided by a flat trailer carrying 10 trees and a front-end loader for lifting and moving the trees. Behind this crew were two 3-man crews backfilling and tamping the planted trees. These two crews "leap-frogged" to keep up with the planting crew. This schedule allowed permitted planting of the 18 to 20 trees in an 8-hour period. Final cleanup was done by day crews later.

Bench-well Installation: The bench-wells were made from light weight cement by a "dry-cast" method. The Forestry Department purchased and retained specially designed metal forms used in the manufacture of these cement pieces so that additional sections could be cast in the future. The 5′ inside-diameter ring was cast in three sections, each section light enough to be moved by 2 men. They were set in mortar on the sidewalk around the hole, leveled and joined together by filling a square key-way between each section with mortar.

Masonry-slab Installation: This was a very interesting operation. The 2 piece masonry slabs were designed to provide a 3″ or 4″ air space directly over the tree ball with a 12″ diameter opening left for the trunk. The slabs were dry-cast of light weight concrete, reinforced to bear pedestrian traffic and sidewalk tractors. The method of installation was devised by the Department of Public Works. The installation was accomplished by constructing an open square frame of 1″ x 3″ boards. The dimensions of this square frame was such that the masonry slab, placed on top, extended over by 3″ on all sides. The frame was set on the earth over the tree ball and leveled. The masonry slab was then place on the frame and again leveled. An asphalt expansion joint was placed around the edge of the slab and the cement walk poured. The cement flowed under the slab to the wooden frame, formed a ledge. Any future tree replacement was made possible by removing the expansion joint and lifting the slabs.

Seat Installation: The seat on each bench-well consists of six 2″ redwood boards cut to form a ring around the tree. Originally only 4 boards were used with the curbside open on the curb-side of the structure. However this arrangement looked incomplete so the seats were extended entirely around the tree. A wooden guage was made to ensure inform overhang around the outer edge of the bench well. The boards having been placed, they were bolted to the masonry base by cadmium-plated ⅜″ x 4″ flat-headed cap screws. A ⅜″ Star Loxin Alloy Shield, driven in the masonry ring, anchored the cap screws. The "dry cast" masonry was easily drilled with high speed steel bit, using a portable generator and electric drill.

Clean-up and Maintenance Schedule: Pea-rock was used to cover the tree ball in the bench-well locations. The trees covered by the masonry slabs were not covered with pea-rock. The maintenance schedule is still incomplete as early soil moisture checks from April to July showed no necessity for watering. It is felt that underground seepage through the sidewalk and curbing will usually provide sufficient moisture for the trees. But, preparations were made to water when necessary by filling the ring or 3″ air space beneath the masonry slab and allowing the water to perculate down to the roots. For this operation a 1000 gallon tank was purchased. To aid in early nutrition, a foliar spray on all trees, once a month, during the first summer and thereafter when a particular tree requires it was planned.

SPECIAL PROBLEMS ENCOUNTERED

Moving Balled Trees: The tree balls ranged from 800 to 1500 pounds. A Ryan Tree Sling was used to contain the ball. The bucket on a front-end loader was removed and a ½″ grab-hook bolted on each arm. These hooks were inserted in the top chain of the tree sling to move and position the trees. This method enabled the loader operator to lower the tree perpendicularly into the hole, a very important item when planting in the confined 4½′ diameter circular excavations. The small loader was found to be much more maneuverable than a truck boom and winch especially since many trees were planted from the sidewalk side of the excavations.

Soil Moisture Check: The soil moisture can easily be checked inside the bench-wells, but the masonry slabs presented a problem as the 12″ opening around the trunk does not facilitate augering. A 2″ x 6″ pipe nipple closed by a threaded brass plug was placed in the ground, about 4″ out from the edge of the masonry slab. The brass plug was kept level with the top of the future walk, and the walk poured. This plug permits a soil moisture test about 3′ away from the tree trunk. If necessary a shallow check can be made at the trunk through the 12″ opening.

Underground Conduits: Cemented conduits necessitated some change in tree location. The Ginkgos (to be covered by the masonry slabs) were originally located 24″ in from the curb. The finished planting found the trunks of these trees anywhere from 17″ to 34″ in from the curb. Anything over 24″ (masonry slabs were in 2 sections of 2′ x 4′) could be corrected by reforming a narrow strip of walk between the slab

(Continued on Page 26)

No. 5—Slab set in place and leveled.

No. 6—Sidewalk poured around slab. Cement under slab will form ledge. Expansion material around slab will aid in removal of slab in event of tree replacement.

Los Angeles Plants Downtown Trees

If you're looking for a testimonial about what trees can do for a downtown city section — look no further than Los Angeles, Calif.

This city proudly and rightfully blows its trumpet to the tune, "There's New Life in Los Angeles" — and all because some spirited businessmen invested in a scientific tree planting program.

During a three-year period, 140 street trees have been planted for a cost in excess of $100,000.

That's right!

Each tree represents an investment between $650 and $1,025 — and these investments are being protected by an average payment of $60 per year per tree for maintenance. (It might surprise you to know Los Angeles trees have to be washed periodically.)

Why are businessmen underwriting this project?

Civic pride is one answer, but Ross O. McIntire, Los Angeles street tree superintendent, says it is more than that. "Businessmen believe that an investment in beautification is an investment in better business and rising property values," he said.

It is conceded that trees cannot make a sale, but by breaking the cold monotony of masonry and concrete with sunlit leaves and dancing shadows, they brighten the spirits of potential customers and provide an all-important sales factor.

A Solid Reason

Arthur Steward, vice president of Union Oil Co., gave a solid businessman's reason for the program. He said that creating a pleasant environment is good for employee morale and reflects itself in greater efficiency and low turnover. He also said that business and industry have a community obligation to replace the beauty they remove in the course of site development.

David Barry, Jr., a real estate man in the Brentwood area, reported additional proof that beauty in a business area is a sound investment. The story concerns one of the most important projects of Los Angeles Beautiful, a committee dedicated to the beautification of Los Angeles, sponsored by the Chamber of Commerce.

Ross O. McIntire (left) and Ed Scanlon, "the Wandering Arborist" look over tree planting in front of Richfied Bldg., Los Angeles, Jan. 26, 1959. Tree is Ficus retusa.

Ten Ficus retusa planted in 1955 by Richfield Oil Co., in front of their downtown office building.

When the Pacific Electric Railway was replaced by buses in the Brentwood and Santa Monica areas, the 37-foot wide right of way was abandoned and the car tracks removed. In the normal course, the center strip would have been black-topped, and perhaps used for parking.

But Barry and other Brentwood businessmen had a better idea. They offered to form an assessment district and plant the abandoned right of way with lawn and flowering coral trees. This required the approval of city governments of Los Angeles and Santa Monica, and Los

(Continued on Page 24)

Branches Of The Law

By Howard Newcomb Morse

Counsellor at Law of the Supreme Court of the United States of America

"Mental Anguish Due to Destruction of Trees"

In the case of Oglesby vs. Town of Winnfield, decided by the Court of Appeal of Louisiana, R. W. Oglesby and his wife, both being lovers of trees, devoted much time and made considerable expenditures in furtherance of their ambition to beautify and enhance the attractiveness of their property by planting, growing and nurturing trees on their lot. Trees from the States of Texas, Tennessee, North Carolina, Mississippi, and Louisiana were then and had been for many years growing thereon.

One tree was planted 35 years ago. It was then four or five years old. Its location on the lot gave it advantages of moisture supply not enjoyed by other trees and, for this reason, it grew faster and became the largest and most stately of them all. It measured eight feet in circumference two and one-half feet above the ground and was more than 10 feet north of the property line and 20 feet north of the curb. Its limbs extended out in all directions, the lower ones slightly downward and the upper ones slightly upward. The tree was the special pride of Oglesby and his wife to the time of her death, a few years ago. Visitors and others who observed it were very much impressed with its symmetry and beauty.

Soon after the town took over the electric light plant, it began to improve the system, which involved installation of new wires at an elevation in some places greater than that of the old ones. To accomplish this change in front of Oglesby's property it was not necessary that the tree should have been stripped of so many of its limbs, on one side for 20 feet from the ground, and on the other side (next to the wires) for a distance of 31 feet. On the north side of the tree limbs were cut that in no manner and to no extent touched the area through which the wires were intended to pass. Nature will not restore limbs of the character and position of those that were removed. Other limbs may grow from the stumps of the amputated ones, but they will be bushy and will extend upward instead of nearly horizontal. Even to attain this result will require many years.

Oglesby brought suit against the town for damages. The Eighth Judicial District Court for the Parish of Winn, Louisiana, rendered judgment for Oglesby in the sum of $250, and the Town of Winnfield appealed. The Court of Appeal of Louisiana affirmed the decision of the court below, but doubled the amount of the judgment. The Court of Appeal declared: ". . . actual damages in a case of this character are not susceptible of proof, but that damages have been sustained by the aggrieved owner in different ways is not open to debate. Disappointment, mortification and other sufferings, not measureable and appreciable in dollars, should be given consideration in determining the award to which he is entitled."

Paul Tilford Receives Award

Tilford Receives Award

The Connecticut Tree Protective Association at its 37th Annual Meeting held at Bridgeport, Connecticut, January 28, gave its Award of Merit to Dr. Paul E. Tilford, Executive-Secretary of the National Arborist Association, Wooster, Ohio. Albert W. Meserve presented the award which read as follows:

Dr. Paul E. Tilford

"Connecticut Tree Protective Associatio n— Through its Officers, Executive Committee and Membership has voted this Award of Merit in recognition of the outstanding contribution made to shade tree appreciation, protection and conservation in the State of Connecticut by Dr. Paul E. Tilford. In witness whereof this Certificate of Award has been signed and presented at Bridgeport, Connecticut, January 28, 1959. A. E. Dimond, President. Herbert J. Cran, Secretary."

In making the presentation Mr. Meserve pointed out that Paul Tilford had served as Editor of the National Shade Tree Conference for the past 20 years. During that period he has edited the annual proceedings, special publications of the Conference, and the monthly magazine Arborist's News.

For the past 12 years Tilford has been the full time executive secretary of the National Arborist Association. From 1941 to 1947 Dr. Tilford served as part time secretary for the Association. Previous to 1947 he was on the staff of the Ohio Agricultural Experiment Station as plant pathologist in charge of investigation of the diseases of shade trees and ornamental plants.

At the business meeting of the Connecticut Tree Protective Association special consideration was given to ways and means of correcting some faults of the law which provides for licensing tree experts.

Officers elected to serve the Association for the coming year are: President, Victor Jarm; Vice-President, Paul Walgren, Jr.; and Secretary-Treasurer, Harry Muench.

The two main speakers on the program were Dr. Spencer H. Davis, Specialist in Plant Pathology, Rutgers University, New Brunswick, N. J., who spoke on "Ornamental Tree Diseases and Their Control," and Dr. Marvin E. Fowler, Chief, Forest Disease Research Division, U.S.D.A., Northeastern Forest Experiment Station, Upper Darby, Pa., who discussed "Pathology in Arboricultural Practice." Joseph A. Dietrich, Tree Warden, Greenwich, Conn., served as moderator for a panel discussion on "What the Connecticut Tree Protective Association can do for You." Panel members were: Paul Tilford, Edward A. Connell, Oscar F. Warner, Albert W. Meserve and Martin S. Learned.

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DED Complications In Wisconsin

A big battle is shaping up in the coming Wisconsin legislative session over state control of the use of insecticides by cities and villages.

Conservationists, who raised a storm of protest over bird kills in the Milwaukee area in the Dutch elm disease spray program, already have indicated that they will demand a stronger law to restrict the use of deadly chemicals.

The League of Wisconsin Municipalities picked up the challenge January 7 at a conference of entomologists at the Loraine Hotel, Madison, Wis. Edward Johnson, the league's executive director, said the league would ask the legislature to give control back to the cities and villages, "where it should be."

Under present law, the state board of health, the state agriculture department and the state conservation department are jointly responsible for setting up regulations. This has been done by a committee, and the regulations have been approved by the three agencies.

Tree spraying is restricted to periods when bird nesting generally will be finished. Cities and villages must obtain permits to apply more than a pound per acre of approved compounds and any quantity of other chemicals.

The committee's foresters and park men argue that they cannot delay to get a permit when a pest appears. The regulations provide for emergency action, but this is not satisfactory to the objectors.

"We believe in local controls that get immediate action," said Johnson. "Many cities have men just as competent as any the state has to say when and what to spray."

E. H. Fisher, state entomologist, commented: "There has been a lot of unsupported testimony and pure fabrications about birds being killed by these sprays." He got enthusiastic support from representatives present of companies selling chemicals.

The entomologists, however, are concerned about the controversy. Evidence and laboratory tests results will be presented at legislative hearings in a prospective wordy battle of trees and crops vs. birds.

"The only evidence I know about, that stands up under proper research, of insecticides killing robins, is from the University of Illinois," said Dale M. Norris, University of Wisconsin entomologists. There, worms got into spraved leaves that fell and formed a mulch and robins that ate the worms were killed."

Larry Motl, the conservation department member of the regulations committee, said that the rule doubtless had flaws and would be revised as necessary.

Out of some 23 chemicals considered, he said, all toxic to some degree to things other than insects, six were listed for use and others would be added by request.

"Where a community has a forester or others who understand the use of insecticides," he went on, "such as Milwaukee, we will issue a blanket permit for the growing season if they will list the products to be used and the approximate methods. We will not insist on pinpointing areas or time. In an emergency, any community can get a permit by telephone or telegraph and send substantiation later."

Milwaukee Journal.

Prominent in the discussion of new weapons to halt dangerous insects was systemic insecticides which work internally in plants and trees to help them make their own bug killing compounds inside.

Results of a five-year test were given January 7 and 8 at the annual insect control conference in Madison, Wis.

The systemics could be the solution for killing off the more destructive bugs while protecting birds and friendly pollinating insects which prey on crop chewing insects.

The weapon works this way: Chemicals are placed in the soil around the roots and absorbed by the plant which takes in these compounds and makes them over in its own insecticide factory. A lethal compound spreads through its foliage and stems. Then, when an aphid nibbles it dies instantly.

Sprays and dusts are reportedly not adequate since all insects which come in contact with them are killed.

Dale Norris, University of Wisconsin entomologist, told of a new forestry development which was well received because in recent years Wisconsin forests have been damaged more by bugs than fire.

Norris used Tetran, an organic phosphate. He reportedly drilled four holes in the base of head high trees, filled them with the soluble compound and plugged them. The tree converted the product and put its own bug killing compound just under the bark. Borers or bugs trying to get into the tree were killed.

The compound he said, kills the insects before they even get through the bark to reach the viscular tissue.

Milwaukee Journal.

Will Serve Coffee Grown in Wisconsin

Sturgeon Bay, Wis.—The most exotic tree in Door County is a full-size coffee tree grown by Lonnie Kopitzke, Ellison Bay high school youth.

The bush bore its first crop last Spring and recently produced its second crop, several hundred beans.

Lonnie's father, editor of the weekly Door Reminder, plans to serve his son's own brand of coffee to the local Lions Club.

The bush was started nine years ago when Lonnie planted six seeds sent him by the president of a coffee company in reply to the boy's letter asking for information about raising the South American tree.

Bare Wire Installation in Yonkers, N. Y.

Close cooperation between two foremen results in fast job

Overlooking scenic Grassy Sprain Reservoir with its minute dam, is Yonker's latest housing development.

Installing miles of power lines in Sprain Lake Development is no small task for the Con Edison's crew headed up by line foreman Cornelius O'Leary.

He is in charge of installing a bare copper line. It's possible to use a bare wire here because there is sufficient room to use long cross arms on the poles. This can't be done generally in the more crowded downtown areas.

One of the problems encountered by Mr. O'Leary was the trimming and disposal of branches which interfered with the installation of the line.

Con Edison called in Tree Preservation Company, headquartered in nearby Elmsford, N. Y., whose crews also trim trees for the city of Yonkers. Foreman Victor Masterson arranged for his crew to trim all interfering trees ahead of the men installing the power lines.

Disposal of cut-off branches is accomplished by feeding them into a Fitchburg Chipper which cuts them up into small wood chips 1 to 3 inches long. This simplifies the hauling away since five loads of brush are reduced to one load of chips, according to Masterson.

By cooperating in this way, the two foremen have solved the problem of branches blocking the installation of the power line into Sprain Lake Development—one of the few bare line installations in the city of Yonkers.

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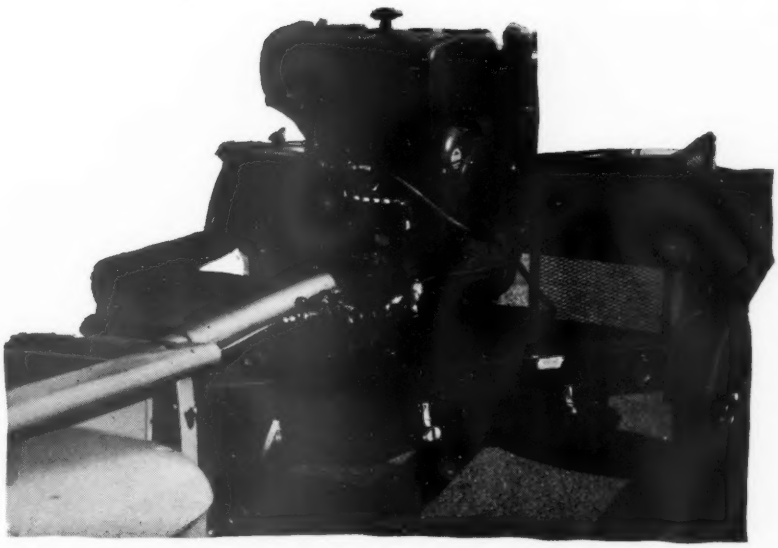

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New York State Arborists Hold Meeting

The New York State Arborists again had a record attendance at the annual meeting of the Association at the Arborist School held January 11-13. This School was started 10 years ago by several departments of the New York State College of Agriculture at Cornell.

The opening buffet supper January 11, was by far the best attended to date. The program included an informal introduction of officers of the New York State Arborists Association and of those participating in the program. Dr. Donald Welch, Department of Plant Pathology, presided as moderator over an informal discussion on arborist problems.

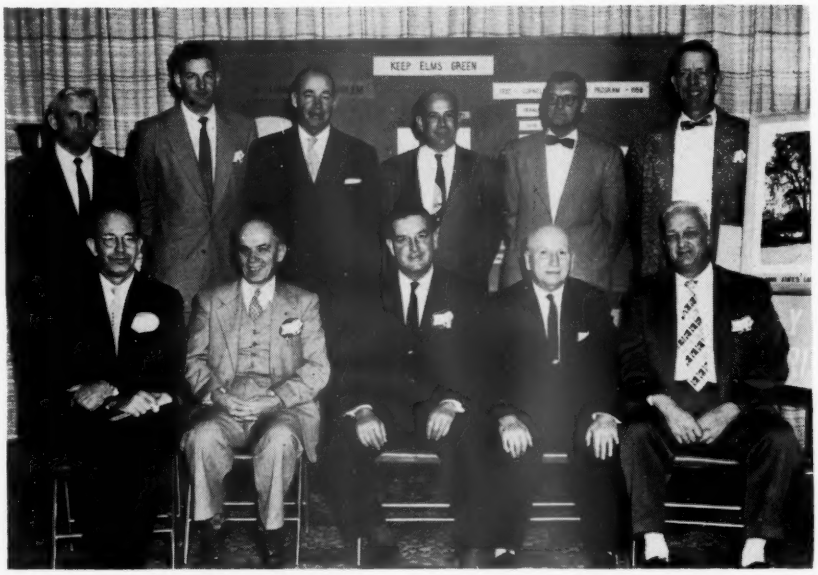
A premier showing of "Rhythmic Motion in Plants," a new motion picture by William Harlow, Syracuse, New York, was a climatic feature of a round up of Arbor Day activities of 1958. The scope of these Arbor Day activities at the local community level, Ithaca, N. Y., and thorough area coverage by T. V. at Rochester and at Schenectady as well as cooperative participation at the state level by the New York Arborists Association and the New York Nurserymen's Association, the State Departments of Education and Conservation, and the Federated Garden Clubs of New York State, created a feeling of substantial accomplishment.

Plans for future Arbor Days are already underway with the Men's Garden Club of America as well as with the Arborists, City Foresters, Tree Wardens, and Park Officials.

The Arbor Day session was chaired by Malcolm Milne, Rochester, N. Y., vice president of the New York State Arborists. The Round up on Dutch Elm Disease was chaired in the morning session by Roger Simmons, Mt. Vernon, N. Y., vice president and in the afternoon by Kenneth Painter, Syracuse, N. Y., first president of the Association.

The business of the New York State Arborists Association was conducted at the meeting of the executive committee, presided over by Basil Jackson, Schenectady, N. Y., as president of the Association. Reports were heard from Secretary-Treasurer Frank Karpick, Buffalo, N. Y., who stated that the membership now stood at 177, with 12 new members for the year 1958, the first year following an increase in dues.

The new officers in addition to Roger Simmons, Mt. Vernon, President, were First Vice President Malcolm Milne, Rochester; Second Vice President Freeman Parr, Hicksville; Third Vice President A. W. Bergeron, Niagara Falls; Secretary-Treasurer Frank Karpick, Buffalo; Executive Committee: Ted Collins, Rochester, George Callaway, Argyle, Arthur Sandstrom, Jordan, Frank Coyne, Yonkers, Laurence Borger, Bayside, Basil Jackson, Schenectady.



Officers of the New York State Arborists Association for 1959 elected at their annual meeting in Statler Hall, Cornell University, Ithaca, N. Y. on January 12, 1959.

Seated (left to right)

A. M. S. Pridham, editor, Shade Tree Notes, Cornell University
Frank Karpick, Secretary-treasurer, re-elected, Buffalo, N. Y. Parks
Roger Simmons, President-elect, Bartlett Tree Co., Mt. Kisco, N. Y.
John H. Coyne, Executive Committee, City of Yonkers Parks, Yonkers, N. Y.
Basil Jackson, Retiring President and member of the Executive Committee, United Tree Service, Schenectady, N. Y.

Standing (left to right)

Laurence J. Borger, Executive Committee, Trees and Gardens, Bayside, N. Y.
Ted Collins, Executive Committee, Ted Collins, Associates, Rochester, N. Y.
Freeman Parr, second vice president, Parr & Hanson, Inc., Hicksville, N. Y.
Malcolm Milne, First Vice President, Green-Vu Landscape Service, Webster
Arthur Sandstrom, Executive Committee, Lewis Tree Expert Co., Syracuse.
George H. Callaway, Executive Committee, Llenroc Tree Experts, Argyle, N. Y.

The work of the Legislative Committee was reported by Dewhirst Wade and Francis Larmore. Present activities anticipate early introduction of proposed legislation along lines worked out with the advisory committee. President Simmons concluded the 1959 annual meeting with specific appointment of local committeemen.

Professional arboriculture was covered in a series of sessions January 13 by Edwin Kirk, Department of Agriculture and Markets, and Dr. John L. George.

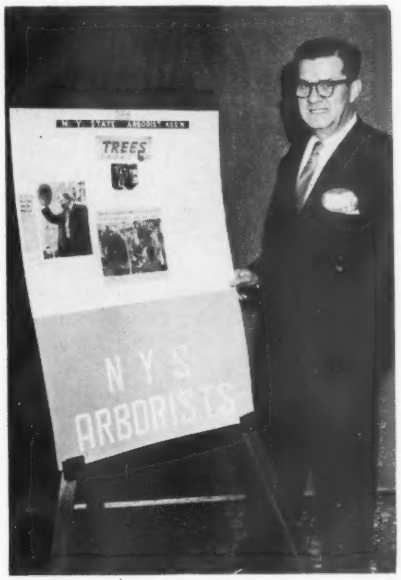
Edwin Kirk extended the good wishes of Donald Wickham, new Commissioner of Agriculture for the State of New York and a man well versed in horticulture.

In the matter of Dutch Elm Disease Control, the Department of Agriculture and Markets holds with the thesis that the disease can be most nearly controlled by sanitation. The need is for a sustained program at the local level. The Department is prepared to assist in establishment of programs at the local level and in training local officials. Mr. Kirk urged the arborist industry to take further steps to forward establishment of local programs and to continue and enlarge the activity which followed the five regional meetings called by the Department of Agriculture and Markets in 1958. Mr. Kirk referred to the possibility of local finance laws in connection with rehabilitation and replacement.

The panel discussion on the operation of control programs for Dutch Elm Disease was chaired by Kenneth Painter, Syracuse, and summaries presented by Irving Dunbar, Hamburg, Charles Schmalz, Rochester, and Dr. Howard Miller, Syracuse.

Irving Dunbar, a member of the Department of Agriculture and Markets, summarized 20 years experience in working with villages and towns in

Western New York. Mr. Dunbar said that most villages are familiar with the need for sanitation programs and some are conducting effective programs. One of the major stumbling blocks is the timely and appropriate disposal of the dead elm, especially attractive as breeding grounds for beetles. Thus the value of money spent in pruning is lost through failure to follow up with destruction of the dead wood or at least



Francis Larmore, Schenectady, former president of the New York State Arborists Association displays a part of the extensive exhibits covering Arbor Day activities in 1958 sponsored by the New York State Arborists Association.

the removal of such wood from the 700 foot radius from pruned trees.

Mr. Schmalz, Men's Garden Clubs, Rochester, reported the existence of a citizen's committee on Dutch Elm Disease and that a good job is being done. Removal and burning of dead elm wood is covered by ordinance in some areas. The Brighton Highway Department has been particularly cooperative and prompt in that community's program.

Dr. Howard Miller, Extension Specialist, College of Forestry, Syracuse, reported results of a sustained scouting program from 1953 to date in which the number of new trees tagged each year has been for 1953—30 trees followed by 425, 1042, 1413, 1804 and in 1958, 473. There are an estimated 15,000 elms in Syracuse. The Kiwanis and Junior Chamber of Commerce are helping develop public interest. In 1958 Syracuse passed an ordinance backing up the sanitation control program. City parks personnel are required to keep records on elms, and tree removal is channelled through the Parks Department. Dead wood must be burned and a check system is in operation to see that this is done. Contract removal for 1957 was reported to be $8450 and for 1959 an estimated $120,000.

Dr. John L. George, Biologist, United States Department of the Interior, Fish and Wildlife Service Patuxent Research Refuge, Laurel, Maryland, addressed the arborists at their annual banquet and outlined the broad problem of learning to live with insects which now as ever dominate in the world.

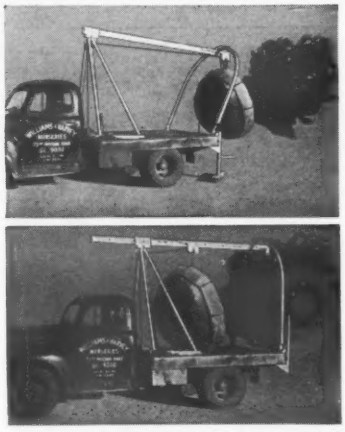
Mr. George reviewed the case of D.D.T. in relation to lethal levels expressed in pounds of active ingredient per acre, single application as related to the amounts used in spraying trees for pest control. These amounts often exceed the lethal dosage of 5 lbs./acre for mammals and 2 lbs./acre for birds with lesser amounts for earthworms and shellfish.

Spot spraying and concentration of DDT in puddles or wet spots where birds and wildlife may drink or preen is specially dangerous. Concentrations of DDT from foliar applications can occur from earthworms eating dead leaves carrying DDT. Thus birds eating such worms and whose bodies concentrate the DDT can receive lethal dosages in this oral fashion as in other ways.

Professional Tree Care

Gordon Nielsen, Department of Entomology at Cornell reported on the values and possibilities of dormant spraying as supplemental to sanitation measures for specific trees and areas.

(Continued on Page 22)



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Pratt is basic in Chlordane, Malathion, Lindane, etc.

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Tailored Trees for Highway Use

By Edward H. Scanlon
Olmsted Falls, Ohio

(Paper given at the Ohio State University Roadside Short Course —October 5, 1954).

In my approach to tree use it could be that perhaps I am a bit more fortunate than most eastern horticulturists because of one phase of my experience. Although I am a native Buckeye I spent some twenty years in California. This experience I consider the finest thing that could have happened to me. By association here I was on the road to becoming a native plant partisan. I suppose the reason for this leaning toward natives is more or less natural. None of us is crazy about overwork, the natives were on our doorstep, everybody was laboring under the misconception that the native was the thing and so we made a lot of silly and expensive mistakes with trees—especially those on streets.

As I said, I consider that I was fortunate when my itchy feet hied me westward in the late 20's. I escaped from the native cult and began to work in a land where, believe it or not, one or two native proponents were finding it tough sledding to sell natives to the garden public, and where only two native tree species, Quercus agrifolia and Platanus racemosa were used for street and ornamental use—that is, to any great extent —and this applies most generally to Southern California where I lived. Of course even in those misty days I couldn't stand the sight of a silver maple and I almost broke my rattle the first time I drove down Sunset Boulevard in Beverly Hills and saw silver maple planted on this, of all streets. Later inspection of Beverly Hills revealed other streets of silver maple, American elm, White ash (F. Americana), and catalpas. Still later I learned that an eastern nurseryman, transplanted to California, had perpetrated this folly.

Of course there were some poor exotic species used also, and on every street, this city incidentally, was all laid out and planted, to street trees at one time, the trees were planted 25 feet apart. The gentleman obviously was selling trees, not beauty or function. Well anyway, the point is that here was a land of exotic trees—trees from Africa, Australia, South American, Mexico, New Zealand and many other faraway lands of climate similar to that of California. Some of the species performed better in their adopted land than they did at home. And vice versa, some American species did real well away from home.

For example, the Monterey Pine (Pinus radiata) is a nondescript tree in its native habitat on the Monterey peninsula, but in Australia it has become of tremendous importance for its timber producing value. So it was with the ornamentals, in fact to mention another exotic that served its adopted country with distinction, there is the example of the so-called California Pepper tree (Schinus molle), actually it is a Peruvian tree. The Pepper was brought to California by the Franciscan Fathers and was used extensively and almost exclusively in the early days when water was a mighty scarce commodity in most California communities. With the coming of ample water the Pepper began to decline. The Shoestring fungus is taking them. This beautiful tree did a job that no native could do, and judging from the ground-water situation that prevails there today, the result of tremendous runoff from roofs and paved roads in the terrific urban developments, I would like to predict that the Pepper may be in for a big comeback some day in the near future.

These experiences in learning of trees from other lands was good. Coupled with a very deep interest in, and study of street tree problems and their cause, it became apparent to me that in the realm of ornamental tree use, there was just no such thing as a native.

When we speak of a plant as a native, or of being indigenous to a certain area we mean the conditions under which it grows in a natural state. A forest or natural woodland has a soft spongy carpet of duff formed by decades or centuries of fallen leaves, twigs and decayed trunks. There is no atmospheric pollution, no compaction of the soil and the root system is unhampered by lawns, curbs, sidewalks and the other unnatural phenomena that make up our ornamental planting sites. Take a native tree out of its natural primeval growing conditions and it immediately becomes an exotic, even though its natural home is only a mere several hundred feet from its new site. Under such conditions why is there such a clinging belief that only trees "native" to an area are satisfactory.

Since my return to Ohio eight years ago to become Commissioner of Shade Trees for the City of Cleveland, I had ample opportunity to prove, at least to my own satisfaction, that my concept of tree use had some merit. Just as there are lands with climate comparable to that of California, so too are there lands with climate comparable to the greater portion of our mid-west and east—particularly Rehder's zones 4 and 5. From China, Japan and parts of Europe and Asia many splendid species have been growing for many years in our leading Botanic Gardens and Arboreta. They are there for us to observe, and having proved their adaptability and beauty, to use.

This, unfortunately, has not generally been true. We have not used the many splendid exotics as widely as we should have, but now it seems that because of the misfortune that has befallen the American elm and the threats to some of the other old standbys there is a definite upsurge of interest in this fine group of neglected trees. Street tree planters beset by the aftermath of the horrible mistakes committed on city streets where forest giants were planted fifteen to twenty feet apart in three, four or six foot treelawns are now turning, in rapidly increasing numbers, to the use of trees of small stature and for special or unusual situations, to selections tailored to fit restricted or established spaces. At long last the philosophy that streets should be landscaped and not planted in forest style, is beginning to flourish.

This philosophy can also be extended to the specialized field of roadside development. There are many situations where large and small globes, pyramids, columns and fastigiate tailored trees can be used with striking results. At most intersections uprights in various forms can be used with telling effect without hazard of sight interference. In cloverleafs and at most structures, overpasses and underpasses, globes, uprights, flowering trees like the crab cherries, goldenrain, etc., and foliage trees like the plums, Faassens Black Norway, Upright Golden elm, Golden English Oak could be employed to serve with distinction.

With our cities coming closer and closer together each year the roadsides are no longer "out in the country." Actually they are today merely boulevards connecting a multitude of small towns, villages and cities, and I believe the use of trees on these thoroughfares could be modified and widened with much more pleasing results than has been the general rule to date.

Another important consideration in today's roadsides is the presence of overhead lines. This consideration has been one of the major factors in the formation of my personal concept of tree use. After observing the left-handed topiary work that was necessary to maintain the high degree of electrical service that we all demand and upon which our every day economy is entirely dependent, it suddenly occurred to me that here was a place for tree planters to practice a little common sense, and of course the overhead people could indulge also in a bit

of this commodity. Why shoudn't these two essentials to better living be correlated? They could be, and it has been done. Proper selection of trees is the important factor and along highways the tree tailored to fit such conditions is a common sense answer to the hacking and butchering of fine trees that unfortunately is necessary to give us light. Let us see that the light shows us new avenues of approach to an harmonious existence for trees and overhead lines.

I recall a roadside planting that I saw several years ago of flowering crabs, this was either in Michigan or Ohio, and it was beautiful. Also it was used in conjunction with a low overhead line installation. The result was harmony and beauty. I hope there are many more such plantings that I have not had the good fortune to see. The crabs are a group of trees that present many exciting possibilities. Almost any shade of leaf and flower color and texture is available, as well as structural form. The Japanese flowering cherries are another group that should be widely used for the same reasons — the Amanogawa presenting a fine upright form and the Kwanzan, grafted on a 6 foot stem is a splendid round-headed tree.

The Goldenrain (Koelreuteria paniculata), Scholar tree(Sophora japonica) are two flowering trees that thrive well in adverse sites. The Chinese cork (Phellodendron amurense) has an exotic umbrella-shaped crown of fine foliage that turns a lovely yellow in the fall. Baumans Horsechestnut, a double flowering, fruitless variety of hippocastanum is a majestic and magnificent tailored tree, while the red flowering Briotii, also fruitless, is well worth greater use. It is catching on as a street tree. The three top Hawthorns, Lavalle, Washington and Pauls Scarlet are excellent small trees deserving of wider use. One of the really overlooked trees, and this believe it or not, is a native, is the American Hophornbeam (Ostrya virginiana). This tree makes a superb little street tree—narrow trunk and 25 foot stature—handles well in small sizes and its bark texture is a picture.

In the slides to come you will see some of my special selections, that is, the trees to which I have referred specifically as "Tailored trees." Included in this category are, in the Norway Maple Selection Series, five outstanding selections, first is the "Cleveland" Norway — a beautiful Upright Oval form; the "Chas. F. Irish" Norway, a fine large roundheaded form with nice upsweeping branches; the "Almira" a low flat dwarf type; the "Improved column," the old form was pyramidal, this is columnar and much nicer; lastly there is the Globehead. This tree, so useful on streets

(Continued on Page 21)

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Exclusive Cutter Design

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WEST CHESTER, PA.

School Children Plant

By R. C. McMillan
Director of Parks,
Manchester, England

On the 6th November, 1958, there were 163 trees planted by 490 school children on two and a half miles of street reservation on Kingsway and a little more than half a mile long on Princess-way, two main thoroughfares stretching from Central Manchester away to the South. The children were scholars selected from seventeen schools in the vicinity of the two highways. Both reservations were originally private tramways with a roadway on either side. Some years ago the tram-rails were lifted, the reservations soiled and sown over with grass seed.

Trees were planted right along the centre of the whole of Kingsway, but only on part of Princess-way because of the presence of a main water pipe beneath the centre of three quarters of the reservation. This area will be planted with specimen tall growing flowering and ornamental shrubs, the roots of which will not interfere with the main water pipe.

The trees planted were Cherries (Prunus Hokusai; P. Hizakura) on either side of the crossings, then followed with Acer platanoides, Acer pseudoplatanus spaethi, Beech, Birch red twigged Lime and London Plane.

The ceremony took the form of a mass planting operation when all the children, with teachers in attendance, converged on that part of the reservation nearest to their school at precisely 2:00 p. m. The Parks Department Staff had already opened the holes and placed a tree in each hole and waited with spades for the children to direct them to their allocated place. The children soon got down to work and planted the trees in a splendid manner. In less than an hour's time all the trees were planted. The City Surveyor provided large notices at the busy street crossings warning motorists "Drive Carefully, Children Planting Trees." These notices were hardly necessary because all motorists including van and lorry drivers slowed down to watch the long line of little groups of children, stretching out of sight, planting trees in the centre of a busy thoroughfare.

The City Police also kept a watchful eye on the children but no trouble or danger occurred during planting operations.

The tree planting scheme was organized and supervised by the Director of Parks, Mr. R. C. McMillan, M.B.E., and his staff with the cooperation of the City Surveyor and Chief Education Officer. The Manchester Junior Trade of Commerce who are interested in all tree planting schemes are contributing towards the cost of the trees.

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LOW COST PROTECTION

... to keep trees healthy and free of insects and disease

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No. 1-WSQ (Square End Mount) Pulley Type Tree Trimmer

Because of demand for a tree trimmer head designed for mounting on a square end pole, we have produced a one-piece hook having a boxlike shank so as to accommodate our 1¼x1⅛-in. rectangular poles. This type supports the pole on three sides, permitting quick, easy assembly to a square end pole. The operating parts are the same as used on our No. 1-W Pulley Type Tree Trimmer and are interchangeable.

This design retains the full strength of the pole at the point of greatest stress and, for added ruggedness, we fit this tool with our Laminated Sitka Spruce poles.

Use Bartlett compound lever trimmers for close, smooth cuts.

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Bartlett Black Asphalt Liquid Tree Paint is now available in 12-ounce Aero-Pack cans. Just press the button and spray. Removable clamp and ring attachment for easy carrying is available at a small extra charge. Can be transferred quickly and easily to a new can. Avoids soiling of clothes and equipment and eliminates use of extra paint can and brush.

12-oz. cans
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Write for new catalog No. 38A listing all Bartlett Tree Trimming Tools and Tree Surgery Supplies.

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Hiway Trees

(Continued from Page 19)

with narrow treelawns or low wires, is grafted on 7 foot stems. It will make a plant to about 15-18 feet tall and with a 12 foot spread. People like these globe trees on streets, believe me, and could do some nice things at highway structures.

In the Red Maple Selection Series are five trees: the "Scanlon," a beautiful narrow pyramid; the "Armstrong" fastigiate; the "Paul Tilford," a beautiful globe; the "Schliesengeri," not an original selection, but one which I am growing, it turns red much earlier in the fall than the normal tree, sometimes as early as mid-August; last is the "Gerling," this broad pyramidal handsome tree is an excellent one for use in controlled plantings.

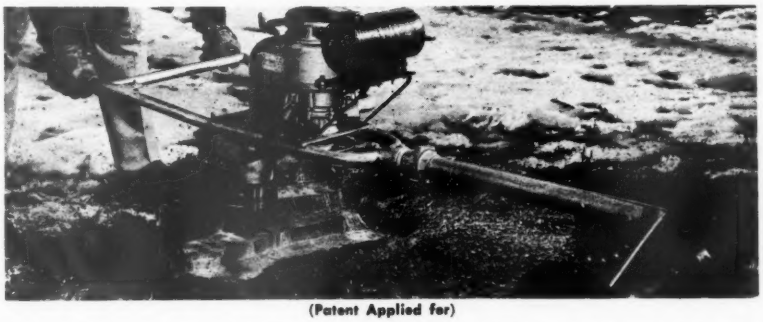
The Sugar Maple Selection Series is coming along slowly with three varieties under way. One is a small globe; second is a beautiful column, the other a strongly branched lyre-shaped tree.

The group in which I am extremely interested is the Ginkgo Selection Series. This I have every reason to believe should prove to be a wonderful addition to our tool kit of trees. Of the four selections, all of which are male trees, one is a natural umbrella-shaped semi-globe; there is a splendid pyramid, a narrow fastigiate form, very lombardy-like, and the fourth is a conventional species form with nice branching habit, and of course not a fruit bearer. This is rather an ambitious program, it takes time, but at least it is under way.

Don't worry about a tree that may have some little insect or disease problem, there is no tree on the face of the earth that is trouble free. Today we have a piece of spray equipment that has widened to great potential, the horizon of tree use. Many trees that formerly were passed over because of some pestiferous trouble can now be used because of the speed, efficiency and economy of the mist sprayer. Put this machine to work intelligently and you can really tailor your tree plantings to the highest degree of perfection.

National Arbor Day

"THE LAST FRIDAY IN APRIL"



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One Man Operation—Under 100 lbs.
Tungsten Carbide Cutter

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N. Y. Arborists

(Continued from Page 17)

Robert Lewis, arborist of Syracuse, N. Y., reported his experience with the Vemeer machine for stump removal. The cutting teeth wear down with 15-18 stumps in sandy soil and ideal conditions, but are often replaced after one stump in frozen ground. The life of the machine was reported as 1500 to 3000 hours.

Milton Heath of Heath Survey Consultants, Boston, Mass. described the technique of laying gas transmission lines.

Characteristic changes in vegetation and in soil texture and color due to escaping gas were shown in a series of excellent color slides.

Prof. Raymond Hirt, College of Forestry, Syracuse University, spoke briefly on the extent of root systems in shade trees.

Three certificates of the New York State Arborist Association, for meritorious achievement in arboriculture, were awarded.

Professor-Emeritus William Harlow, College of Forestry, a unit of the State University of New York at Syracuse University, received one for outstanding photography; the second certificate was awarded past president H. H. Severn, Trojan Tree Service, Vestal, N. Y.; and the third certificate was awarded to Mr. and Mrs. Bliss of Pittsford, N. Y. for their extensive and successful program of Arbor Day activities in Rochester area.

Prof. William D. Harlow (left), State University College of Forestry at Syracuse University receives a certificate from Dewhirst Wade, on behalf of the New York State Arborists Association. Mrs. Harlow participated in the award made in recognition of devoted service, leadership and interest in the better appreciation and preservation of our shade trees.

Harold H. Severn, Trojan Tree Service, Vestal, N. Y., receives a certificate of recognition for his interest and devoted service in better appreciation and preservation of our shade trees. The former president of the New York State Arborists Association received the reward from Basil Jackson, President of the New York State Arborists Association.

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THE
LAST FRIDAY
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Virtually all sizes and varieties of plant material . . . from 40 ft. Pin Oaks to small vegetable seedlings . . . have been moved successfully even in hottest weather when coated with WILT-PRUF!
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3. Excellent natural nitrogen—readiness to use—going to work at once.
4. Delightful flowing into the soil in handling—uniform structure creates maximum economy.
5. Normal moisture holding, with gradual delivery only to soil and plants assure the maximum in plant development.
6. A product processed, based on 30 years proven continuous operation, has a ph of 4.5 to 5.5, that is quickly, easily and economically adjusted to needs of any plant material.
7. The most efficient and economical soil building nature product in existence.

"Green-Up America With Green Thumb Peat"

PRICES ON TRUCK OR CAR LOADS ON REQUEST

GREEN THUMB PEAT-HUMUS CO.

CAPAC, MICHIGAN

Los Angeles

(Continued from Page 11)

Angeles Beautiful entered the picture. It arranged a meeting between top officials of the two governments, and invited the publishers of newspapers in the area also to attend.

The right of way was planted, at the expense of the property owners, who also undertook the maintenance. This area was like any other outlying business district at the time, just on the verge of its development. Business property was selling for about $50 a foot.

Since the boulevard was beautified by the center strip planting, seven years ago, business property has risen in value from $50 a front foot to $1,000 a front foot. Barry attributes this primarily to the landscaping of the abandoned right of way which inspired the building of many handsome new commercial structures.

Pioneered by Richfield

The Los Angeles tree planting project was pioneered by the Richfield Oil Co. in 1955 when they planted the first trees in the downtown area—13 trees at a cost of approximately $20,000.

The impetus of this planting was not felt immediately. However, after it became apparent that trees could grow in a downtown area, even those who watched the project with "tongue in cheek" readily agreed that this planting was the start of new life in downtown Los Angeles. Consequently applications for similar plantings were made.

The Magic Number "5"

According to the Chamber of Commerce, the enthusiastic response to the planting of trees in downtown and business districts in Los Angeles is the outcome of a planned program combining five factors:

1. proper tree selection
2. spacing
3. practical and economical installation
4. cooperation among city agencies, property owners and civic organizations
5. publicity

One committee member stated, "Disregard of any one of the five factors will result in failure."

Of all the elements involved, there is no doubt that the most vital is the proper selection of trees. After considering a list of suggested trees, the committee agreed that Ficus retusa and Ficus nitida were best adapted to the conditions of that area and only those could be used. The tree is ideal for limited space, withstands smog and has virtually no leaf droppage.

The next step was selection of installation. The City of Los Angeles had two standard plans: closing of the tree well with brick laid in a cushion of sand or use of a cast iron ornamental grille and tree guards. Since there is a tendency of the bricks to settle, or turn, the first method was not considered practical for use in districts with congested pedestrian traffic so the second plan was adopted.

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POINT CUT

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FORESTER

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POINT CUT A versatile pruner, with a long easy reach, and the ability to give capacity cuts of 1¼" at the throat and snip small suckers at blade points. Cuts quick and clean, with no damage to bark. Light weight — non-tiring action. Blades and handles of heat-treated alloy steel. Two sizes — 20" or 24".

2890S LOPPING SHEAR Lightweight, tough and perfectly balanced. Narrow head gets into difficult crotches. Tough hickory handles can be cut to any desired length by user. Cuts up to $1\frac{3}{16}$" with minimum effort.

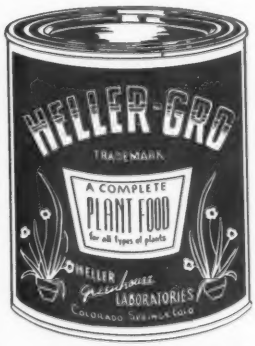
POLE PRUNERS

LOPPING SHEAR

H. K. PORTER, Inc. Somerville 43, Mass.

For Storm Damaged Trees Include HELLER-GRO Feeding

To offset the widespread tree damage caused by the severe storms all over the country, you can recommend HELLER-GRO. It's a complete plant food, 15 - 15 - 15, with trace elements added. It's economical, and easy to use in feeding.



Reports from the U. S. Department of Agriculture, and your own experience verify that healthy trees withstand the effects of disease and insects better. HELLER-GRO produces a strong root system, healthy growth.

PLAN NOW FOR HELLER-GRO FEEDING

HELLER-GRO will furnish the plant nutrients needed for healthy growth, which means accelerated recovery from storm damage. HELLER-GRO is supplied in concentrated paste form which dissolves completely in water for root or foliar feeding. All ingredients U. S. P. grade. Fast acting nitrates and slower release urea provide immediate and long growth response.

WRITE ON YOUR STATIONERY FOR FREE TRIAL SAMPLE

HELLER GREENHOUSE LABORATORIES

Room 32, 218 E. Pikes Peak Ave., Colorado Springs, Colo.

The Richfield Oil Co. designed and developed the new tree grille and guard at a cost of $245 each for the original thirteen trees. An outstanding feature of the grille is the fact that since it is custom made, not cast, it is possible to construct various sizes with no added cost except when more materials are required.

It's Not Cheap

The cost of planting a tree the first two years was more than $1,000 per tree. Since then the price has dropped, but it's still not cheap! If a businessman has room for four or more trees he can have them installed for $650 each. Three trees or less and he has to pay $775 apiece, installed.

When someone is willing to spend money to beautifuy the town, assistance is given by the tree superintendent and his staff. They research the area and find whether an old cistern is in the way or whether conduits have to be moved. Field surveys are made to determine the most advantageous locations for plantings with relation to building features, traffic control, and other utility installations. Consequently, trees may be spaced 40 to 60 feet apart, or at another location, may be spaced 25 to 30 feet apart to frame an entrance or some outstanding feature of a building.

Frederic A. Chase, executive director of the Los Angeles Beautiful Clean Community Crusade, sums up the project by saying, "We are happy to be able to assist in making the Los Angeles area most definitely tree-minded. We are confident our goal of 1,000 trees will be accomplished because—beauty is a good investment."

FOR YOUR CALENDAR

Midwest Chapter, National Shade Tree Conference, Hotel LaSalle, Chicago, Ill., February 18, 19, 20, 1959.

The New Jersey Certified Tree Expert examination is scheduled for February 20th, 1959. Those interested may contact Mr. George Moorehead, Secretary, N. J. Div. of Forestry, Broad St. Bank Bldg., Trenton, New Jersey.

Massachusetts Tree Wardens, Arborists and Utilities Conference, University of Massachusetts Campus, Amherst, Mass. March 23-27, 1959.

Annual Meeting of the Connecticut Forest and Park Association in morning. 1959 Public Shade Tree Conference in Late Morning and Early Afternoon. Auditorium, Connecticut Light and Power Company, Main Office Building, Berlin, Conn. The Date: April 13, 1959.

Duke University, Durham, N. C., April 21-22, 1959. Forestry Symposium on Direct Seeding in the South.

60th Annual Meeting of the American Society of Landscape Architects, The Palmer House, Chicago, Ill., June 28th through July 1, 1959.

35th National Shade Tree Conference, Detroit, Mich., August 17-21, 1959.

18th Annual Short Course on Roadside Development, Columbus, Ohio, October 6, 7, 8, 9, 1959.

In operation since 1950

"DOUBLED...TREBLED OUTPUT"
with a **FITCHBURG CHIPPER**

▷ **"Our Fitchburg Chippers have not only doubled or trebled the output of our Davey crew but are doing so without any noticeable wear from blowing sand."**
Davey Tree Surgery Co., Ltd., San Francisco, California

The Davey Tree Surgery Co. works under sandy, wind-swept desert conditions—far off main roads—to trim back windbreaks. They write, "we have never had a Fitchburg Chipper wear out or give excessive trouble" under these severe operating conditions.

Write us for a free cut-a-way drawing of the Fitchburg Chipper. Examine the Fitchburg safety features that give you fast, safe wood chipping. Look at the power take-off clutch for safe stop and start. No waiting for a flywheel to speed up or slow down here. No bearing trouble, either. Now look at the patented, spring-activated feed plate that adjusts itself automatically up to the Chipper's rated capacity, and makes Fitchburg Chippers easy-to-feed—one-man machines. Feel the tough, chrome steel chipping head knives—tough, needing only periodic sharpening.

This is your answer, for low cost wood chipping and brush disposal. Your guarantee for a fast chipping job . . . when and where you need it!

▷ **"2,000 operating hours with neither employee accident due to chipper operation nor major failure."**
Northern Tree Company, Petoskey, Michigan

More proof that Fitchburg Chippers can reduce tree company brush disposal costs with complete safety. Northern Tree never has the delay of waiting until weather conditions are "right" for burning brush along heavily wooded rights-of-way. Instead they chip brush anytime, anywhere, with half the labor . . . in half the time. Why take chances with forest fires when chipping is so easy? Protect your firm, your tree service crews, with Fitchburg Wood Chippers.

FREE Valuable Data

Write the Fitchburg Engineering Corporation, Dept. TR-29. You will receive specifications, a copy of the One Year Guarantee, copies of testimonial letters from other tree surgeons. Please tell us the conditions you have to meet, and we will quote you the prices of the Fitchburg Chipper *that will* do the best job efficiently and economically.

FITCHBURG ENGINEERING CORPORATION
FITCHBURG, MASSACHUSETTS

Flint Trees

(Continued from Page 10)

and curb. However those trees placed less than 24" from the curb presented a problem. This was corrected by cutting the inside edge of the masonry slab to conform with the smaller distance. The light-weight concrete facilitated this procedure. Thus the trunk of each tree is centered in the 12" opening. The presence of conduits in the excavations of the London Plane presented a different problem. The locations of the tree had to be in the center of each masonry ring. In 4 locations bare-rooted trees were planted directly over the conduits after "pockets" for the roots had been dug on either side of the conduit and backfilled with loam. In other locations the balls were cut down somewhat to conform to the smaller hole.

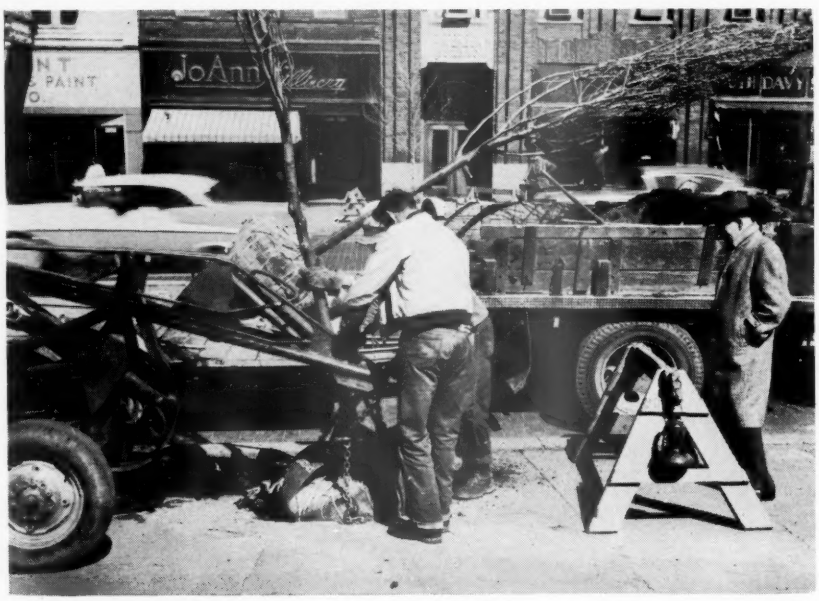
COSTS

Total cost was about $270.00 per tree installed. Major costs were as follows:

1. London Plane Trees with Bench Wells (37)
   - A. Tree cost ..... $ 58.30
   - B. Planting cost 44.54
   - C. Excavation 17.89
   - D. Bench Well Installation 20.05
   - E. Bench Well and Redwood Seats 84.75
   - F. Miscellaneous Expenses (Extra Bench Wells, Seat Installation, Tree Reserve Fund Maintenance, etc.) 49.76

   $275.29

2. Ginkgo trees with Masonry Slabs (48)
   - A. Tree Cost 83.40
   - B. Planting Cost 44.54
   - C. Excavation 17.89
   - D. Masonry Slab Installation 46.45



No. 7—Trees set in hole cut in walk. Bucket has been removed from front-end loader and grab hooks bolted in. The tree was lifted up between the arms without damage to trunk.

KILL 2 PESTS WITH 1 SPRAYING

If both SCALE insects and the insect carriers of DUTCH ELM DISEASE are your problem, save time, work and money with one dormant spraying. Just combine *STANDARD Superior Dormant Spray Oil* with *STANDARD Elm Spray*.

STANDARD Superior Dormant Spray Oil—Developed and tested by Standard Oil Research . . . proved by extensive use in the Midwest. Contains more highly refined base oils than the older, conventional dormant spray oils. *Saves money*—less spray materials needed. *Safer*, too!

STANDARD Elm Spray—The most popular elm spray in the Midwest! Proved in *eight years* of wide commercial use. Emulsifiable 25% DDT concentrate containing Acme White Oil.

RECOMMENDED MIXTURES, PER 100 GALLONS OF SPRAY:

Type of Sprayer	STANDARD Superior Dormant Spray Oil	STANDARD Elm Spray
Hydraulic	1½ gallons	8 gallons
Mist Blowers	8 gallons	50 gallons

For products, information and Standard Oil help on your specific pest control problem, contact your local Standard Oil Agent, or write direct to

STANDARD OIL COMPANY (Indiana)
910 S. Michigan Ave.
Chicago 80, Illinois

You expect more from STANDARD and get it!

E. Masonry Slab	25.12
F. Miscellaneous Expenses	49.76
	$267.16

PUBLIC REACTION

Public opinion was divided when the project was first announced. People were decidedly against the proposal. The main objections seemed to be the possible attraction to birds to the downtown area (Starlings roosted in downtown trees many many years ago) falling leaves, and "mis-use of the taxpayer's money" (the entire project was actually financed by the Greater Flint Downtown Merchants Corporation).

Several merchants along the street registered objections when asked about their basements, locations, etc. However, generally the merchants reaction was favorable.

After the trees were planted and began to leaf out the opinion of the public changed a great deal. Although many continued to make humorous remarks about downtown trees, serious criticism completely disappeared and comments became complimentary. Many people took a personal interest in the day-to-day welfare of the trees. Visitors through Flint were impressed. As the leaves grew the trees created a pleasing pattern of green throughout the length of Saginaw Street. The London Plane Trees quickly became large and dense enough to create a 6-8 foot shady area, which made the tree well benches very inviting to pedestrians, who began to use them daily. The tree wells began to be used as waste baskets for cigarette wrappers, etc. but this seemed to be better than having paper thrown onto streets and sidewalks.

As of August all 85 trees were healthy and growing. The project was complete and was pronounced a complete success. The beauty of the parklike atmosphere has led to speculation as of turning Flint's entire main street into a landscaped plaza for pedestrians only and has led to a one-day try out period of closing the street to all but pedestrians. This attracted nation wide publicity via Life magazine.

Other cities have now initiated similar projects.

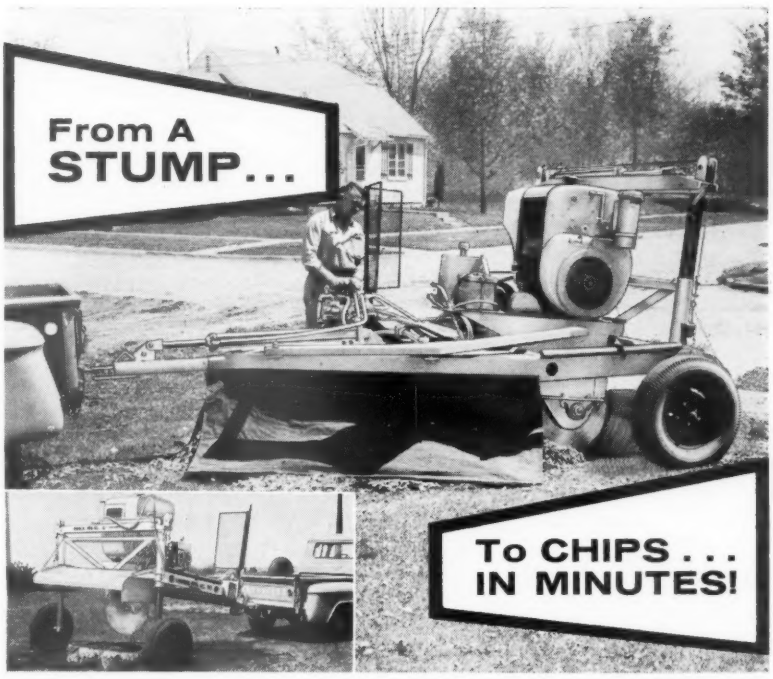
Yes, Flint has found out for itself that there is room for beauty by way of landscaping even in its busiest shopping area. Its trees are here to stay and its citizens like them very much.

APPENDIX

The selection of London Plane and Ginkgos was determined by availability of 3"-4" trees. These species were the best suited for this environment of various trees of that size. Ultimately the London Plane will spread so that extensive side pruning will have to be done and while the growing conditions will tend to inhibit growth we are faced with the possibility of a 50′ or 60′ tree where a 30′ tree is desired. The Ginkgos will also spread with age.

With these possible handicaps in mind the Forestry Department has planted Pyramidal European Hornbeam *(Carpinus betulus Fastigiata)* and a pyradmidal London Plane. These trees can be substituted for the existing trees when they reach the 3" - 4" size unless the adverse environment has resulted in dwarfing the trees already on the streets.

It is unfortunate that a larger selection of smaller trees with minimum maintenance requirements such as the European Hornbeam, Asiatic maples and American Hop hornbeam are not available in 3"-4" sizes.



Vermeer POW-R-STUMP CUTTER

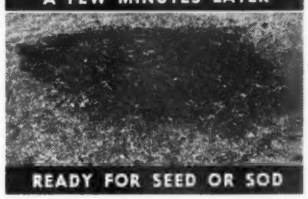
Removes Stumps in Minutes—Not Hours!

Tree Service men and park, recreational and municipal officials all over the country are praising the Vermeer POW-R-STUMP CUTTER. More than an unusual new machine, the Vermeer POW-R-STUMP CUTTER is a revolutionary, new *principle*, that once and for ever has taken the cost, the time and the drudgery of labor out of stump-removal! "From a stump to chips . . . in minutes," is more than a byword, too, it's a fabulous fact. The Vermeer POW-R-STUMP CUTTER removes the largest tree stump—rips it to shreds to a depth of ten inches below the surface of the ground—all in a matter of minutes. One man, only, is required for the whole operation. And when the job is done there's no stump left to be hauled away, no gaping hole to be filled, no rutted lawns, no damaged curbs, driveways or sidewalks.

This is just part of the remarkable story about the Vermeer POW-R-STUMP CUTTER. To get all the details, write—today—for the colorful new FREE folder, just off the press.

AN UNSIGHTLY STUMP

A FEW MINUTES LATER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871 Edgerton St. St. Paul 1, Minn.

Spraying Progress

(Continued from Page 7)

the use of mist sprayers started in New England, it very rapidly spread to the nearby states of New York and New Jersey, then to Pennsylvania, Ohio, Indiana, Illinois, Michigan, Wisconsin, and other of the Central States. As an indication as to the rapid acceptance of mist spraying, approximately 40 of these large mist sprayers went into service in Wisconsin in a single season.

Another important trend in the use of mist sprayers has been from truck-mounted to trailer-mounted equipment. The advantages of trailer-mounting, pointed out by the experienced users, has been the opportunity of trailing a unit by any make or model of light truck or tractor, and whenever weather conditions become unfavorable for spraying, either because of wind or rain, the trailer unit can be disconnected and the truck released for other work in a few minutes' time. Under certain conditions, truck-mounted equipment is still the practical and most desirable mounting and both types are in general use.

As more of the mist sprayers in the 28,000 to 30,000 cu. ft. per minute capacity were put in use, there were requests from the larger cities and some of the large custom operators for still larger equipment, and in 1958 a still larger type mist sprayer of 60,000 cu. ft. per minute capacity was introduced equipped with a 300 gallon tank. With this larger equipment it was found that the same spray crew of two men, tractor driver and spray operator, could protect trees at a faster rate of work, usually at least one-third faster, and that they could work under more unfavorable spraying conditions. With these facts established, every indication is that this size equipment will be the choice of many cities, state agencies, and custom operators, for the same reason that larger tractors, trucks, and other industrial equipment is being put into service each year.

So, in the short period of only thirteen years, 1946 to 1959, and with most of the changeover coming since 1950, we have seen a very unusual evolution in shade tree spraying methods with the cost per individual tree being gradually reduced from that of hydraulic spraying to that of modern, large air volume mist spraying. The reductions in overall cost has been approximately ½ so that where large number of trees are to be sprayed, either directly by a municipality or on a contract basis, overall savings of approximately ½ are available where suitable mist spraying equipment is available, and where the trees are located so the work can be done with this type of equipment.

At the same time that the need for the 60,000 c.f.m. equipment was emphasized, smaller communities using small to medium size hydraulic sprayers indicated their need for equipment for a limited number of trees and within the range of their smaller budgets. To meet this requirement, a modern mist sprayer attachment to be used in connection with the hydraulic sprayer is available with air capacity of 12,000 cu. ft. per minute, approximately ½ larger than the original mist sprayer, which started this whole program of mist spraying.

Those having the responsibility for selection of mist spraying equipment in the future, will always want to specify the air capacity wanted, the tank size in keeping with air capacity, mechanical agitation of spray liquids is also a very desirable feature, and the equipment should be designed for quick change from low gallonage oil emulsions to the higher gallonage regularly associated with water suspensions and with certain insect control problems requiring this type of application. Even the higher gallonage rates of application are only a fraction of the gallonage regularly applied with hydraulic sprayers, usually representing about 1/10th of the total amount of liquid used in hydraulic spraying.

The attached partial list of articles that have previously appeared in TREES MAGAZINE on the subject of mist spraying, have all contributed to the better understanding of this new, faster and more economical method of shade tree spraying.

List of articles that have previously appeared in TREES MAGAZINE

March-April 1947—"A New Method of Applying Concentrated Sprays" by S. F. Potts Bureau of Entomology & Plant Quarantine, Agricultural Research Administration, New Haven, Conn.

January-February 1955—"Developments in Mist Blower Spraying" by Clyde C. Hamilton, Associate Research Specialist in Entomology, Rutgers University.

January-February 1957—"Elm Leaf Beetle and Dutch Elm Disease—Experiments on Practical Use of Mist Blowers in New York State" by John G. Matthysse, Cornell University, Ithaca, N. Y.

The Mail Pouch

June 20, 1958
Mr. Edward H. Scanlon, Editor
Trees Magazine
7621 Lewis Road
Olmsted Falls, Ohio
Dear Mr. Scanlon:

I don't know whether you are planning to print any comments on Mr. Harold Ramsey's article in your May-June issue, but I will let you know what I think of it anyway:

I think he pricks the whole balloon of his point of view with his own statement . . . "We *do not know* what accumulating and increasingly damaging results we may unwittingly be contributing to . . . (when we spray with DDT)." Even though he doesn't *know* that what he is doing is safe, he discounts the people who are criticizing him.

It is a characteristic of many people who occupy high academic and governmental positions today to become somewhat detached from a search for true and primary public interest. There is always the immediate problem to be solved. The gypsy moths are there and spraying is the only way to get rid of them. Just this morning I noticed this headine in the New York Times:

"Researchers Say Salk Shots Do Not Damage the Brain"

Admirable! Having just had Salk shots given to my children I am now pleased to know that their brains have not been damaged.

Insecticides are a glaring example of solving an immediate problem with the easiest method at hand—without stopping to consider true public interest. And as a few people here and there in the mass of the public stand up to protest, the bureaucrats become indignant and insist that *they* know what is best.

When you pin down an insecticide dispenser who is on the public payroll he will usually admit that he doesn't *know* that what he is doing is safe. He is *told* to apply so many pounds per acre—*by the label on the can.* Of course, there are people in the government who pass on these label recommendations, and supposedly somewhere along the line there is a medical doctor who says this product is harmless if applied correctly. But the influences on these government people are many and subtle. The mere existence of a vast chemical industry requires that that industry be kept healthy and productive so that the economy will not falter. More and more, true public interest is becoming remote to the people who pass on these products. That is a strong statement. But sometimes you have to make strong statements to make people like Mr. Ramsey realize that there is more to insect poisons than what is printed on the can.

Sincerely yours,
Robert Rodale, Editor
Organic Gardening and Farming
Emmaus, Pa.

Mr. E. H. Scanlon, Editor
Trees Magazine
7521 Lewis Road
Olmsted Falls, Ohio
Dear Mr. Scanlon:

You have requested our comment on a recent criticism of the article "DDT on Trial," which originated in this department, appearing in the May-June issue of "Trees." A reader feels that one of our statements contradicted the balance of the article, where, in stating that "we *do not know* what accumulating or damaging results we may be contributing to," etc. we nevertheless continue the use of DDT and discount the beliefs of anyone criticising our opinion.

Perhaps this statement should more properly have been worded "We *do not know* what accumulating or damaging results *others* may be causing in *their* use of DDT"—but here in Massachusetts we *do know* that we have aerially sprayed over 3 million acres on programs prepared with extreme care, full knowledge and cooperation of our residents and rigid supervision of the actual application. Using only about *one-fourth* of the "allowable, approved or recommended" strength of DDT we have decimated the Gypsy Moth with *no known* lasting damages to humans or wildlife. Previously used methods of manual control, to the tune of some 50 million dollars of state funds, never accomplished the results that careful use of DDT has shown, so we have used great pains in Massachusetts to *use it properly.* We agree fully that unregulated and uncontrolled spraying with DDT is a serious problem and have offered our complete cooperation with any organization caring to do further research on the subject.

Very truly yours,
H. L. Ramsey
Bureau Chief

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Fitchburg Chipper

Fitchburg Chipper in action—as described in story on page 14—"Bare Wire Installation."

Dow Testing Crab Grass Control Agent

Agricultural research laboratories of The Dow Chemical Company are testing a new pre-emergence herbicide which may prove effective for control of weeds in farm crops and crab grass in turf. Applied prior to the crab grass season, the compound promises to prevent growth of the weed. The new material also shows promise for control of other turf weeds such as muhlenbergia and chickweed, according to Dow spokesmen.

In addition to meeting turf weed problems, the new compound also promises to be useful as a pre-emergence or early post-emergence weed killer in crops such as soybeans, cotton, corn, snapbeans, peanuts, and peas.

The compound is undergoing further research trials to prove its utility. As yet there are no stocks available for sale or general sampling. For that matter, the compound does not yet have a name. The material will be given further laboratory and field testing by Dow this coming year and will be sampled to public research agencies for further testing.

Dow Begins Production Of Polyethylene Film

The Dow Chemical Company announced that it has begun production of polyethylene film for agricultural uses such as mulching, trench silo liners or covers, weather proofing, ditch and pond liners, temporary greenhouses and as tarpaulins.

Trademarked Polyfilm, the new product will be produced by Extruders, Inc., a Dow subsidiary located in Hawthorne, California.

Polyfilm is supplied in a dispenser package which keeps the loose end of the film ready for unwinding and cutting for easier use on the job site. The rectangular shape of the container also makes storage simpler.

Initial distribution will be in the 11 western-most states (California, Oregon, Washington, Montana, Idaho, Utah, Nevada, Arizona, New Mexico, Colorado, Wyoming) with national distribution to follow as soon as possible.

According to Dow spokesmen, Polyfilm will be available in thicknesses of 1½, 2, 4 and 6 mils in all popular widths at prevailing industry prices. Polyfilm will be sold through standard building and farm supply channels.

Typical construction uses of polyethylene film are as moisture barriers in buildings, protective coverings for materials and as temporary space enclosures.

Position Wanted

Commercial Arborist, 10 years experience in this field. Expert in all phases. 2 years college training. Will accept supervisory or sales. Age 27, married, four children. Member of National Shade Conference. Top references available. Write Trees Magazine, Box 7W-5, Olmsted Falls, Ohio.

For Sale

Used Lawrence Aeromist Sprayer, in fair condition, priced reasonable. Mahoning Tree Service, Box 59, Hubbard, Ohio.

DON'T MISS THIS BUY

80 FOOT TELESCOPIC GARLAND BOOM Completely Electrically Operated, 3000 watt Generator runs off 21 h.p. engine, mounted on 56 Chev. two ton cab over, 16 foot Flat Bed, 5,800 actual miles, excellent condition, this equipment ideal for line clearing or Street Tree pruning. Because of illness this equipment has been used only four months, has been stored the past two years.

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Maybe you've noticed we're not making any claims. We don't have to. See for yourself. For more information, write to Dept. 207, Pioneer Saws, Waukegan, Ill.

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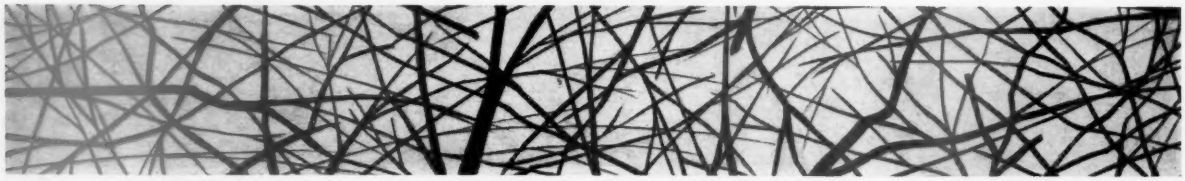

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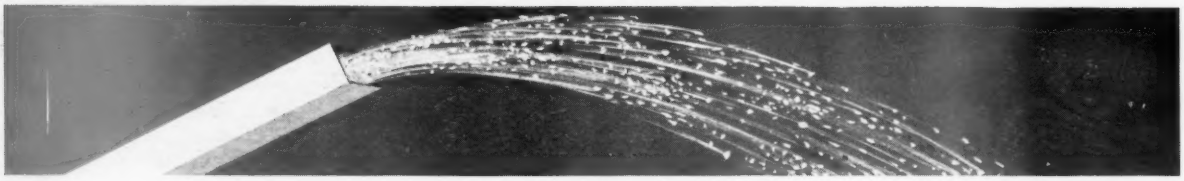

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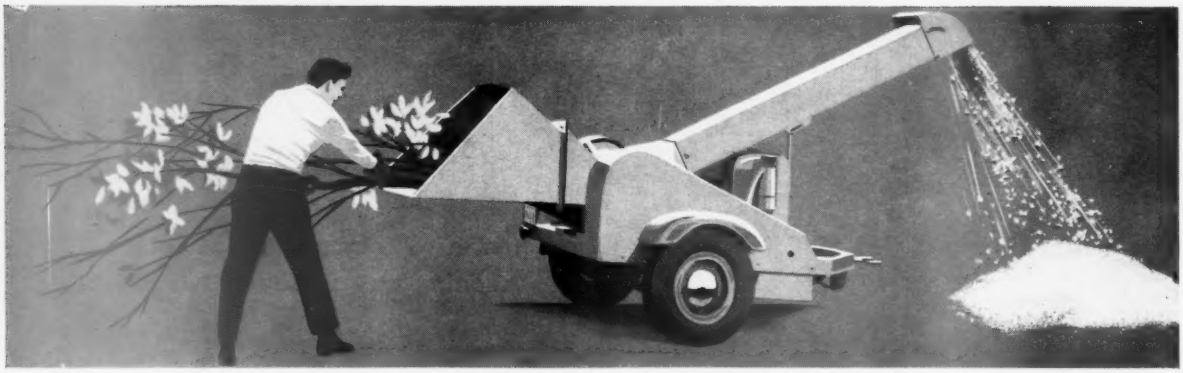

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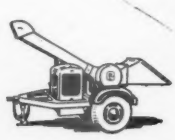
Asplundh Chippers can cut your hauling cost 75%, completely eliminate brush burning, and provide a useful, valuable by-product.

So ravenous is its appetite, so powerful its motor, and so fast its chipping action, it is equalled by no other. Yet it is so simple in design that maintenance is reduced to an absolute minimum.

Write *today* for full details. Better—ask for a prompt demonstration, without the slightest obligation.

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